# Synkronizer 10
# User Manual

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# 1 Welcome

Dear User,

Welcome to Synkronizer, the most powerful Excel comparison tool in the market.

Synkronizer will help you find differences in your Excel files. Fast, reliable and with a clear interface to "browse" the results on screen.

But there's more: we don't just show you the differences; we'll help you maintain your valuable excel data and formulas and provide you the tool to get your files back "in-sync".
You can update missing or different data and move it from one file to the other. fully transparent and with full control.

- Comparison of Excel workbooks and highlighting of detected differences in worksheets
- Project configurations can be saved to disk for easy retrieval of your favorite settings or repetitive tasks.
- Production of a user friendly difference report
- Transfer of missing data and updating of differences.
- Merging of Excel spreadsheets/databases
- Programmatic access with Visual Basic for Application (VBA) (developer edition only)

This manual explains how to use Synkronizer and how to effectively accomplish above tasks

In case you have other suggestions to improve Synkronizer, let us know and drop us know via the contact menu.

Best regards,

Your XL Consulting GmbH Team

## 1.1 What's new?

Synkronizer 10 is a complete overhaul of the previous version. In fact, it is almost a new software. If you are used to older versions of Synkronizer, the new interface is an immediate eye-catcher. But there is a whole lot more...

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- Synkronizer 10 is a COM add-in and no longer a Microsoft Excel add-in
- Projects allow you to save regular comparisons in a project file. All your settings (choice of files, sheets, ranges, databases etc.) can be saved to project files. Each project consists of one or two workbooks and a series of pairs of worksheets, ranges or databases, as many as needed
- Ranges and databases can be set per pair of worksheets, individually. In previous versions these options could be set only for a single pair of tables
- The Navigator toolbar has been replaced with the Navigator form. All differences are now depicted onscreen, intuitively presented and ready for review and update
- When differences are "highlighted" the original background color can be restored until the form is closed. In previous Synkronizer versions, the highlighted cells' original background colors were permanently lost.
- For developers there are many new possibilities. Existing code will require a "wrapper Addin" which provides (almost full) backward compatibility with the previous (single) function.
  Many situations where customers felt the need to write there own code should be handled by the ability to use project files. Synkronizer 10 is now written as a Com-Addin, with it's own object model, and offering more flexibility to developers albeit with a completely new syntax. Please read the extensive help provided for developers. Can;t find the answer? Our support is happy to help with code transition. Feel free to contact us via the contact form on our website.

## 1.2 Editions

**Synkronizer 10 is available in 3 "editions"**

| | Free Evaluation | Professional | Developer |
|---|---|---|---|
| Range restriction | A1:Z100 | unrestricted | unrestricted |
| Highlight Differences | • | • | • |
| Create a Difference Report | • | • | • |
| Navigator | • | • | • |
| Automation (VBA access) | | | • |
| Price | free | EUR 79.-- | EUR 149.-- |

When you purchase a license for Synkronizer Professional or Developer Edition you'll receive a "registration key" which is then sent to our "Activation server" that verifies that the registration key is legitimate and not used by anyone else.

# 2 Install, Uninstall

## 2.1 Install

**Installation**

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Synkronizer 10 is a COM add-in for **32-bit versions of Excel** 2010 (32 bit), 2007, 2003 and XP.
It works on **32 bit and 64 bit versions of Windows** (XP thru Win7) if you install 32 bit Office/Excel.

**Synkronizer 10 does NOT work with the 64 bit version of Excel 2010**.

In order to install the application proceed as follows:

1. Download the latest version of Synkronizer.
2. Log-in to Windows using an account with **administrator rights**
3. Double-click the installation file SetupSynkronizer.10.X.xxx.exe
4. Follow the instructions...
5. Done.
   - Start Excel 2010/2007: You'll find the Synkronizer 10 icon in the "**Review**" tab
   - Start Excel 2003/2002(XP): You'll find the Synkronizer 10 icon in the "**Tools**" menu

**Type of installations**

There are three different installation methods:

- **Standard Installation**
  This installation method is used for single-user licenses.

- **Network Installation**
  Standard Installation PLUS a shortcut to a shared network license file. **Only for users/companies who purchased a special NETWORK LICENSE KEY.**
  This installation is designed for corporate networks. Workstations need PERMANENT access to the license data which is stored on the network share.
  During the installation you will be asked to specify TWO directories:
  the INSTALLATION directory where the program files will be installed. (preferably on the local disk).
  the NETWORK directory where the license file is located. This MUST be an existing directory. An empty license file will be copied here when it doesn't exist.
  (a shortcut to the network license file will be placed in the installation folder).

- **Administrative Installation**
  Standard Installation PLUS a shortcut to a shared license distribution file. **Only for users/companies who purchased a MULTI-USER LICENSE KEY.**
  This installation method is designed for system administrators in companies which have multi-user licenses. Workstations need ONETIME access to obtain registration data which is then stored on the local disk.
  During the installation you will be asked to specify TWO directories:
  the INSTALLATION directory where the program files will be installed.
  the DISTRIBUTION directory where the license distribution files are located. This MUST be an existing directory. Empty license distribution files will be copied here when they don't exist.
  (a shortcut to the distribution folder will be placed in the installation folder).

- **Scripted Installations**
  the setup executable accepts **command line switches** for use in scripted installations or batch files. The syntax is described in this chapter.

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**Administrator Rights**
The user who performs the installation MUST have administrator privileges.

**Network Installation**
The user who performs the installation MUST have administrator privileges.
The user who registers and activates the license and/or wants to add/remove nodes(workstations) must have WRITE/MODIFY permission to the license file on the network share.
if the workstation is already registered in the file the user for that computer needs READ permission to the license file on the share.

**Administrative Installation**
The user who performs the installation MUST have administrator privileges.
The user who maintains the License distribution files must have WRITE/MODIFY permissions to files on the network share.
The user of the local computer needs READ permission to the license distribution file on the share.

**Problems**
Setup should run without problems. However the infamous "User Account Control" does make life difficult in some cases.
If you are on a corporate network, go to your administrator. If you are on a home PC or laptop and setup doesn't complete as expected, or synkronizer reports "initialization" errors on startup, some "manual" work may be required.

**Dependencies**
Synkronizer setup assumes the VB6 runtimes are installed. These are pre installed on Vista and Windows7, but could be missing on (older) Windows XP installations.
If not installed you'll find them here: Search Microsoft.com

Synkronizer setup installs some Dll's and Ocx files to the install directory, which it attempts to register with RegSvr32. RegSvr32 may fail if your login account doesn't have Administrator Privileges, or if "User Account Control" in Win7/Vista prevents access. We need to open a "console" with admin rights.. To do that we must create a shortcut to cmd.exe with some extras.

- Right-click the desktop. Select menu *New*. Select menu *Shortcut*. Type `cmd.exe`. Follow instruction and the shortcut is created.
- Right-click the shortcut. Select menu *Properties*. Select tab *Shortcut*. Select the button *Advanced*. Check *Run As Administrator*. Click *OK* twice to close the dialog.
- Now double-click the shortcut. You should get a warning from User Account control. You must accept.

- Navigate to your installation directory and use regsvr32 to "register" the files.

```
c:
cd \program files\synkronizer  (or program files (x86)\synkronizer
cd synkronizer 10.0
regsvr32 synk10.dll
regsvr32 synklic.dll
regsvr32 Codejock.Controls.ocx
regsvr32 Codejock.ReportControl.ocx
```

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## 2.2 Uninstall

**Uninstall**

Synkronizer 10 is a COM-Addin. It takes very few resources and time during startup, so you can leave it enabled and available for direct use.
It depends on several other components and these must also be properly (un-)installed. So please do not simply delete the folder.

Should you decide to remove Synkronizer from your computer, then proceed as follows:

**Uninstall via Control Panel**
1. In Windows, open the Control Panel
2. Select "Programs and Features" (Windows 7, Vista) or "Software" (Windows XP)
3. Select "Synkronizer 10" and click on "Uninstall"

**Disable Synkronizer in Excel**
You can also disable Excel loading the Synkronizer Addin during startup. The Addin requires very little time or resources so this is not recommended.
However it's your choice:

**Excel 2010/2007**
1. Choose Start » Excel Options
2. Select the add-ins menu
3. With the drop-down button, select COM Add-ins
4. Remove Synkronizer 10

**Excel 2003/XP**
A bit more complex as the ComAddins menu item is not installed by default.

1. Select the menu command View » Toolbars » Customize
2. Select the Tools category
3. Search "COM Add-ins ..." in the Commands list
4. Select the COM add-ins ... with the mouse and move it into the Excel Tools menu
5. Close the Customize window
6. Select the menu Tools » COM Add-Ins ...
7. Remove the check of "Synkronizer 10"

## 2.3 Network Installation

**Application**

Only in case you have purchased a network license (registration key) the files needed by the application can be installed to a shared network drive, although it is not mandatory. The network license file must be installed on a shared network drive.

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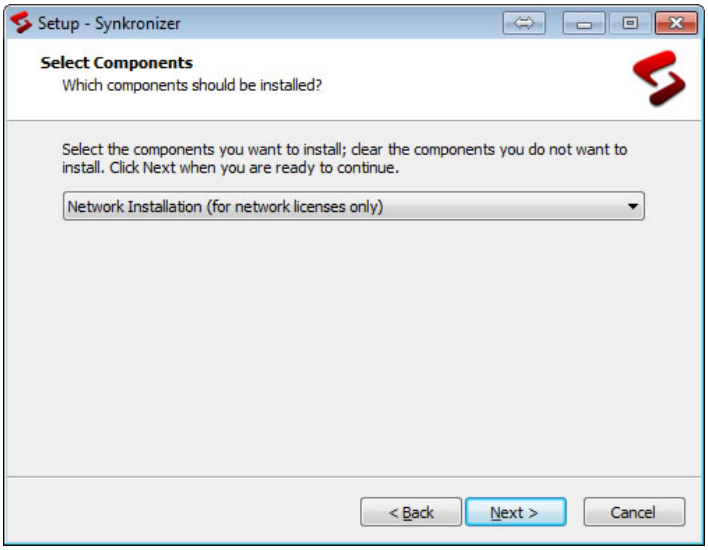
### The network license

The network license file is a single file located on a shared folder which contains the registration key for the edition(s) you purchased. That license file will be activated once (and locked to the server/path). The client PC's can then be allocated or removed based on their network name, without further need for activation.

### Initial Installation

1. Create a **shared network drive**.

2. Install the software using the method "Network Installation".


Setup - Synkronizer
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Network Installation (for network licenses only)
< Back
Next >
Cancel

3. Then select the network folder in which the license should be copied. Note: Synkronizer requires a **UNC path**.

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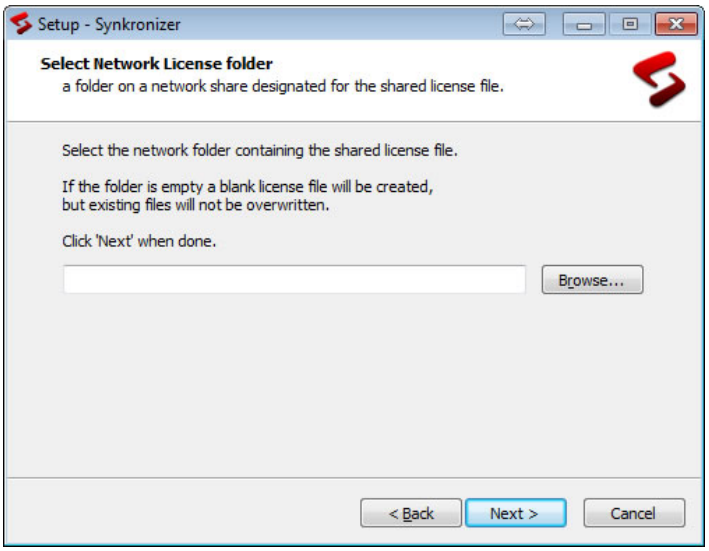
Setup - Synkronizer
Select Network License folder
a folder on a network share designated for the shared license file.
Select the network folder containing the shared license file.
If the folder is empty a blank license file will be created,
but existing files will not be overwritten.
Click 'Next' when done.
Browse...
< Back
Next >
Cancel

4. Complete the installation.

5. Start Excel and Synkronizer.

6. Register and activate the software

7. Add the workstations which are allowed use Synkronizer (see below)

**Installations on workstations**

The installation on the workstations is very easy. Perform a network installation and select the network directory, which contains the license file. If the software is activated and the workstation is assigned, the user can work with Synkronizer immediately.

**Schema Network**

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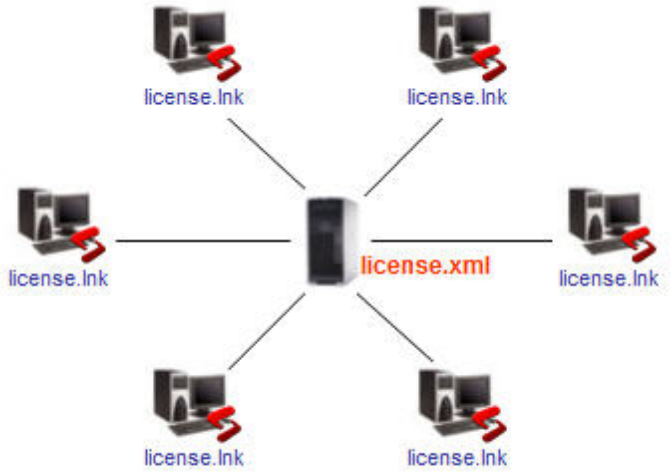


The license file (license.xml, red) is located on a shared folder.
The installation folder of the Synkronizer users contain a shortcut (license.lnk, blue) to the license file.

**Permissions**

At least one user must have write/modify permission on the license file, while all others only need read permissions. The user(s) with write permission can register/activate the license and manage the list of allowed computers.

### 2.3.1 Adding allowed workstations

Once the license is registered and activated it is necessary to add the workstation(s) to the list of allowed computers.

This can be done from any computer where Synkronizer is installed. (Note that the install folder must contain a shortcut to the network license file and the user making the changes must have write permissions.)

1. Start Synkronizer.
   (also shown when you select the menu Project » Settings... » System » Registration/Activation)

2. Click the "Manage" tab.

3. Select workstations in the "Category" dropdown and the edition in the License "dropdown".

4. Now you can enter the computers/users which are allowed to work with Synkronizer. Just enter the correct computer names (and optional description) in the input fields and click on the "+ Plus" button.

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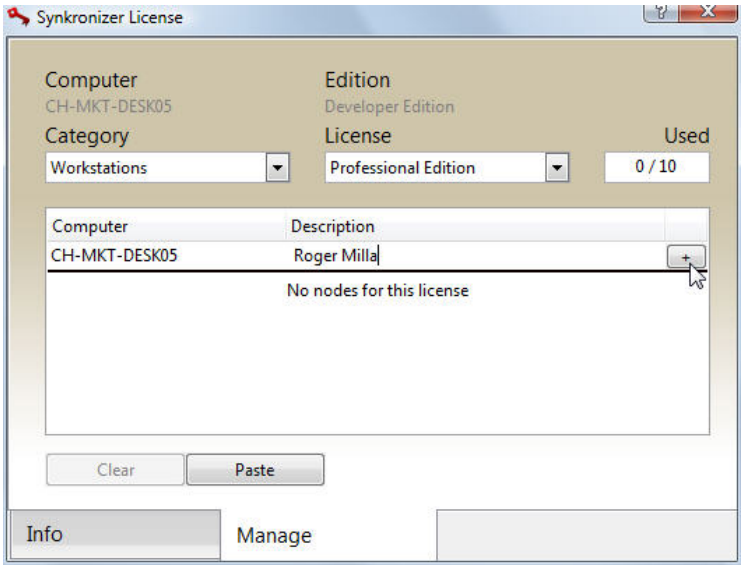
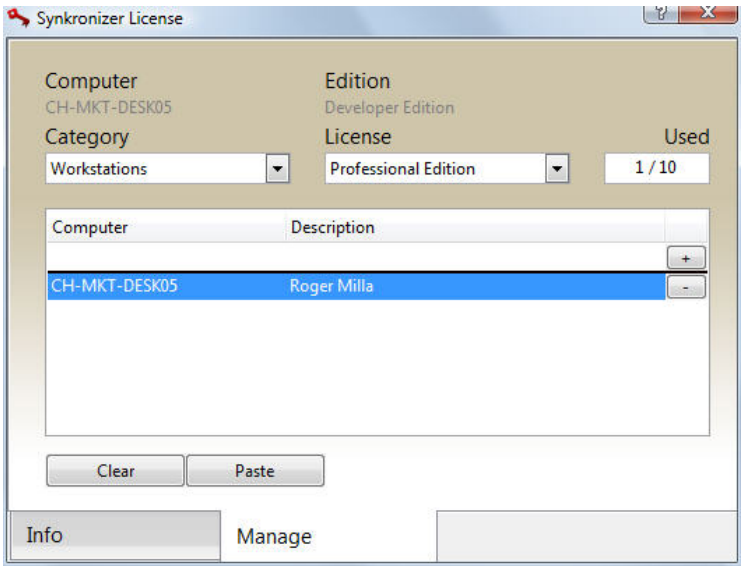



The allowed computer will then be added to the "allowed" computer list.




**Add a series of workstations**

You can prepare a list of workstations (and descriptions) and paste it into the application. The list can be created from a script or typed in a text editor or excel worksheet. Proceed as follows:

1. Start Excel

2. Create a list with the workstation names and users

3. Select and copy the list

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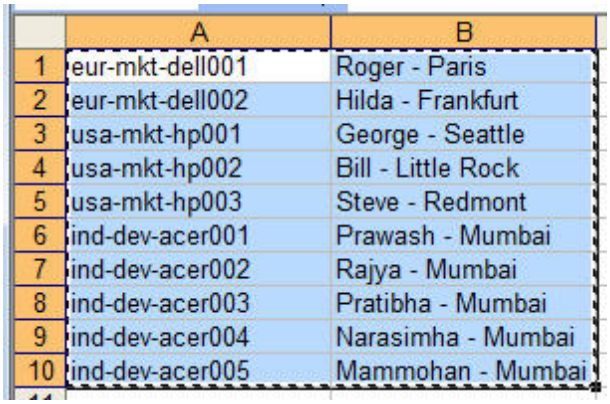
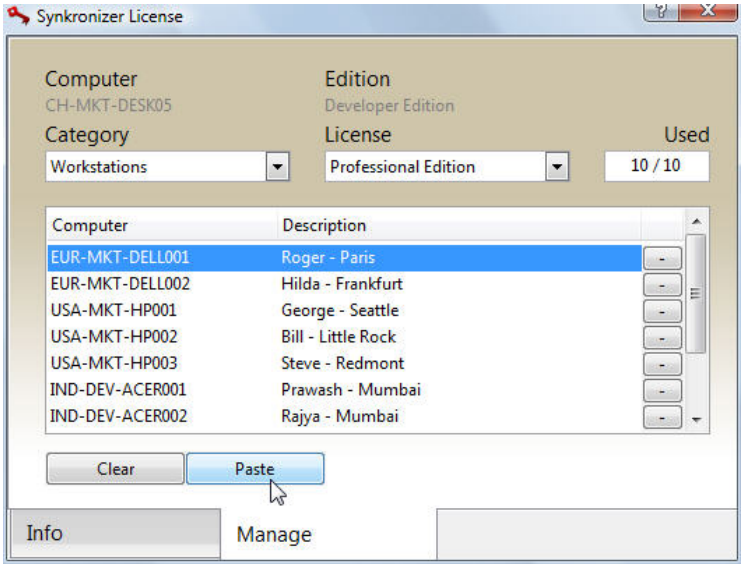


| | A | B |
|---|---|---|
| 1 | eur-mkt-dell001 | Roger - Paris |
| 2 | eur-mkt-dell002 | Hilda - Frankfurt |
| 3 | usa-mkt-hp001 | George - Seattle |
| 4 | usa-mkt-hp002 | Bill - Little Rock |
| 5 | usa-mkt-hp003 | Steve - Redmont |
| 6 | ind-dev-acer001 | Prawash - Mumbai |
| 7 | ind-dev-acer002 | Rajya - Mumbai |
| 8 | ind-dev-acer003 | Pratibha - Mumbai |
| 9 | ind-dev-acer004 | Narasimha - Mumbai |
| 10 | ind-dev-acer005 | Mammohan - Mumbai |

4. Open the "Manage" tab of Synkronizer

5. Press "Paste". The list is filled (with a maximum number of licensed computers)




### Changing / editing

Items in the list cannot be edited or changed. If a name or description is wrong, remove the existing item and then add the item with the correct text.

## 2.4 Administrative Installation

### Definition

This installation method is suitable for the installation of multi-user licenses. In a distribution file, the administrator defines the COMPUTERS (by their bios computer name) and the LICENSE KEY they will use.
During installation, the user must select the folder containing the distribution files. A shortcut to this

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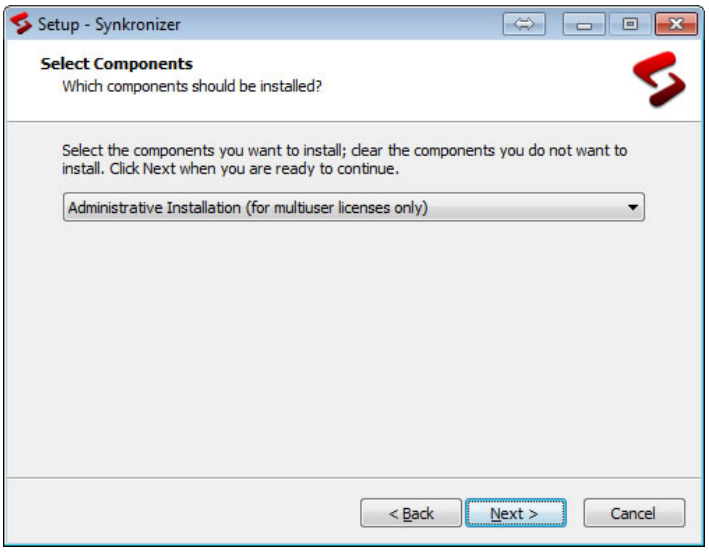
folder is then placed in the installation folder.

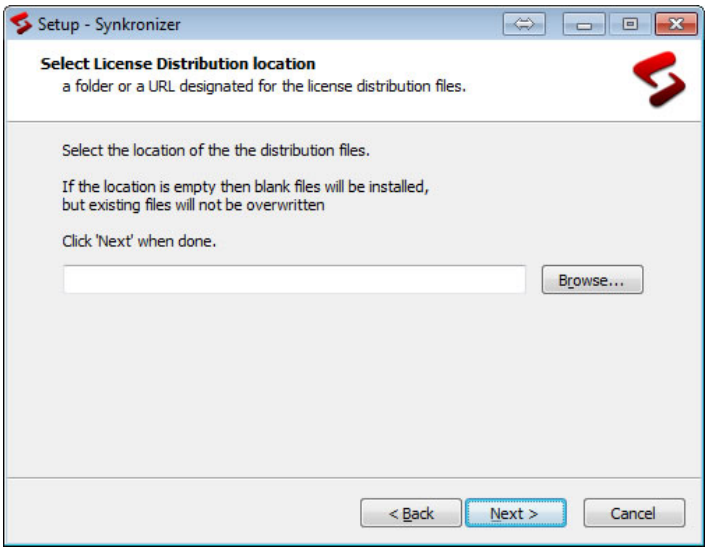
When the user starts the Synkronizer program it will first look in the install folder for a valid license file. If it fails BUT it does find a LicenseDistribution shortcut it will then lookup the computer name in the distribution file and read the associated registration key. Then it contacts our activation server and creates a local license file.

### Initial Installation

1. Install the software using the method "Administrative Installation".


Setup - Synkronizer
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Administrative Installation (for multiuser licenses only)
< Back
Next >
Cancel

2. Then select the directory in which the distribution files to be copied.


Setup - Synkronizer
Select License Distribution location
a folder or a URL designated for the license distribution files.
Select the location of the the distribution files.
If the location is empty then blank files will be installed, but existing files will not be overwritten
Click 'Next' when done.
Browse...
< Back
Next >
Cancel

3. Complete the installation.

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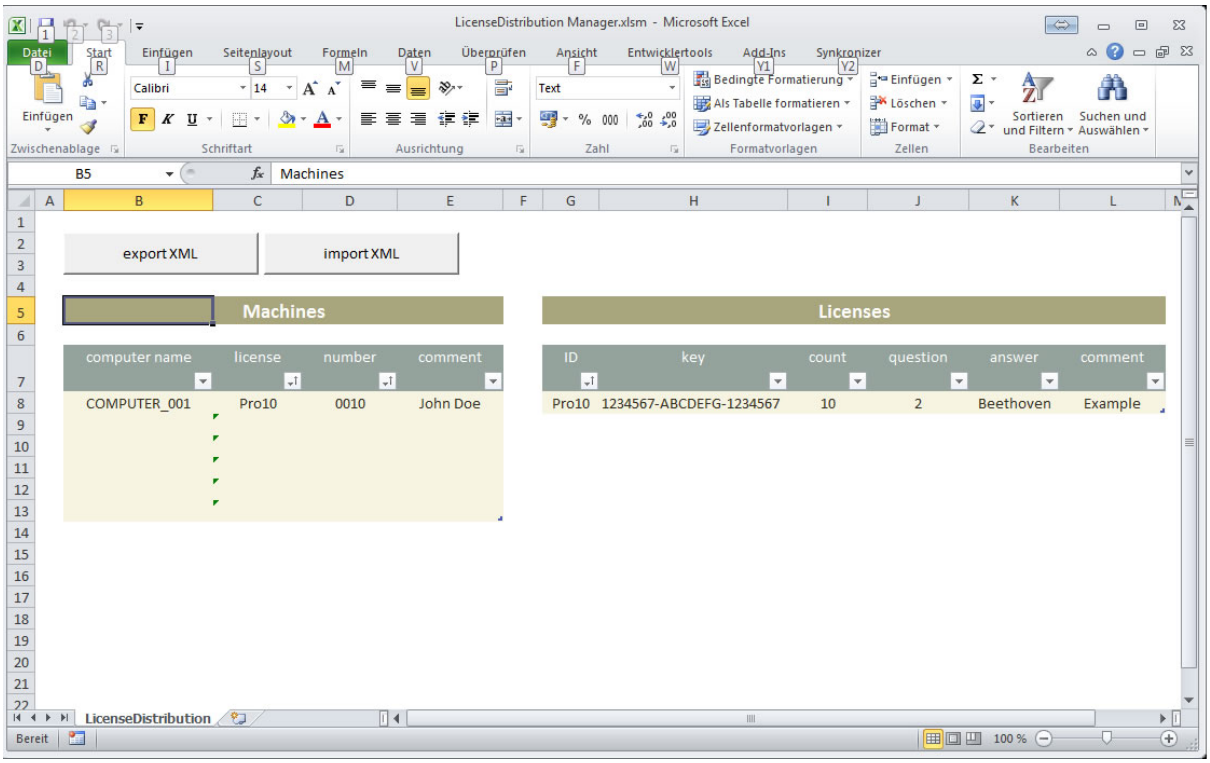
4. Open the file "LicenseDistribution Manager.xlsm".




This file contains all relevant data set, which is necessary for the installation on the workstations. The following chapter describes how the data must be entered.

**File LicenseDistribution.xml**
This file is being read by the workstations.
It can be edited with any XML editor, but we've provided an excel file for your convenience.

**File LicenseDistribution Manager.xlsm**
This Excel file is just an editing tool for the xml file listed above: e.g. the tables in the Excel file are mapped to the XML
and provide a convenient way to edit and maintain the actual xml data.

**DO NOT FORGET TO EXPORT THE XML FROM THE EXCEL FILE**

**Table Licenses**

The license data can be entered in this table. Enter the following data:

| | |
|---|---|
| **ID** | Unique identifier for the license (eg, PRO10, DEV5). This ID will be used in the table machines. |
| **key** | Registration key of Synkronizer |
| **count** | Number of licenses |
| **question** | Number of the security question (required for software activation) |

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**answer** Answer of the security question
**comment** Optional comment

**Table Machines**

This table defines the workstations, computers or laptops, on which Synkronizer is to be installed. The following fields are available:

**computer name** Name of the computer to be installed Synkronizer. The computer name must be unique, if not the installation fails later.
**license number** Identifier or ID of the license, which is entered in the first column of Table Licenses. Unique number of the license. If for example a ten-user license is present, the numbers one through ten must be entered in this column.
**comment** Optional comment

Once the data are entered, save the excel file **AND click on the button "XML export."**
This generates the distribution file in the same directory. To export to a different directory or file use standard excel xml export (form the developer tab).

**TIP for computers that wont be connected to your network during first use...**
You could create a LicenseDistribution file for each computer and save them under separate names.
Then EITHER: copy the actual xml file to the local installation folder as "LicenseDistribution.xml"
OR: create/edit a windows shortcut file named "LicenseDistribution" pointing to the generated file.

**Install licenses on computers**
To enable the installation on the workstations / computers / laptops, make sure that the license file is on a shared directory (alternatively, the distribution files are to be included in the installation packet). If this is the case, then install the software using the method "Administrative Install". In the step "Select directory for distribution license," you must select the directory in which contains the license files. The software is then activated and registered as soon as Synkronizer is started.
Once the Synkronizer program has been started and successfully activated the license info is stored in the local computer's license.xml and the shortcut or distribution file can be deleted.

## 2.5 Scripted installations

Following are the custom command line switches accepted by the setup executable

**Choose the installation type /TYPE=**
must be one of the following (upper or lowercase)
standard
network
distrib

**Set the network or distribution folder /FOLDER=**
a valid file path or URL for the network folder, e.g.:
X:\folder\subfolder

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\\server\share\folder\subfolder

ignored for type=standard
required for type=network or type=distrib
can be included in single or double quotes

**Set the installation folder** **/DIR=**
a valid file path or URL for the installation folder, e.g.:
C:\Program Files (x86)\Synkronizer

default: {pf32}\Synkronizer\Synkronizer 10.0

**Minimize user interaction** **/SILENT**
**No output or messages** **/VERYSILENT**
**Create a log in the temp directory** **/LOG**

There are other parameters available, which are described in the following link:
http://www.jrsoftware.org/ishelp/index.php?topic=setupcmdline

Examples:

**Standard Installation**
SetupSynkronizer.10.x.xxx.exe /TYPE=standard /silent

**Network Installation**
SetupSynkronizer.10.x.xxx.exe /TYPE=network /FOLDER=x:\my folder

**Administrative Installation**
SetupSynkronizer10.x.xxx.exe /TYPE=distrib /FOLDER=x:\my folder

## 2.6 Registration

When you purchase a license you will receive a "registration key" for the edition you bought. This registration key is used to "register" and "activate" the software. The activation process is fully automated, it only needs an internet connection. It can also be done via email if firewall settings prevent the program's direct communication with our server.

**What happens during the activation process?**

The registration key and some hardware codes is sent to our activation server, which returns one or two activation codes. The activation codes received from the server should "match" the codes sent and will then be stored in the license file. The license file is now uniquely coupled to your PC and your software is activated.

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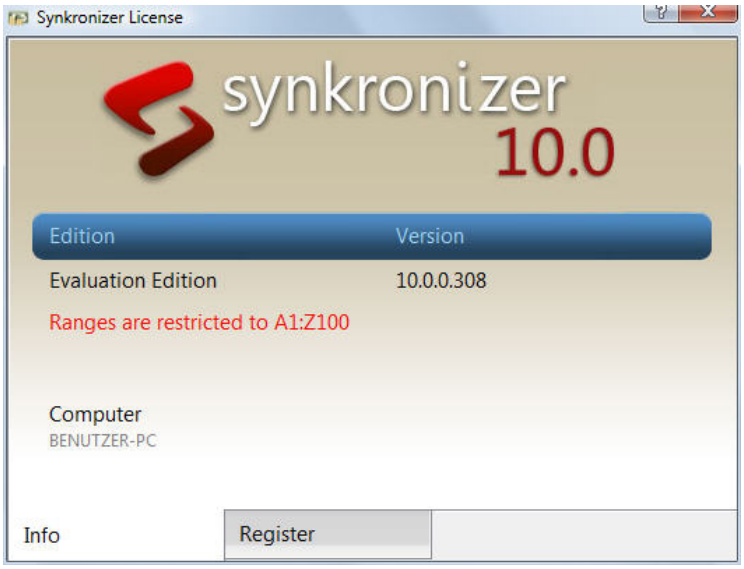
### Network Installation

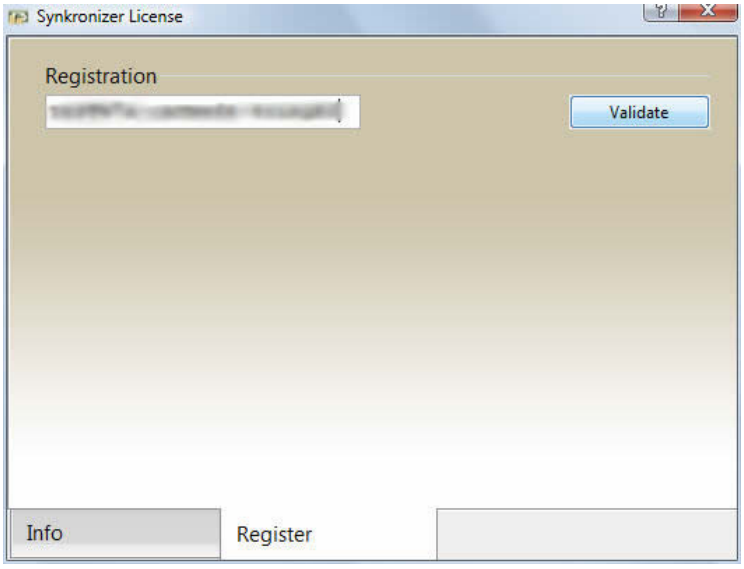
Before you can activate a network license, you'll need to create a share folder on the network drive. Please study this chapter.

### To start the activation process:

1. Start Synkronizer. The startup screen appears
   (also shown when you select the menu Project » Settings... » System » Registration/Activation)




2. Press "Register". The following form appears:




   Enter the registration key and press "Validate".

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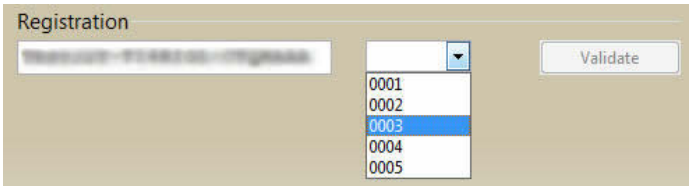
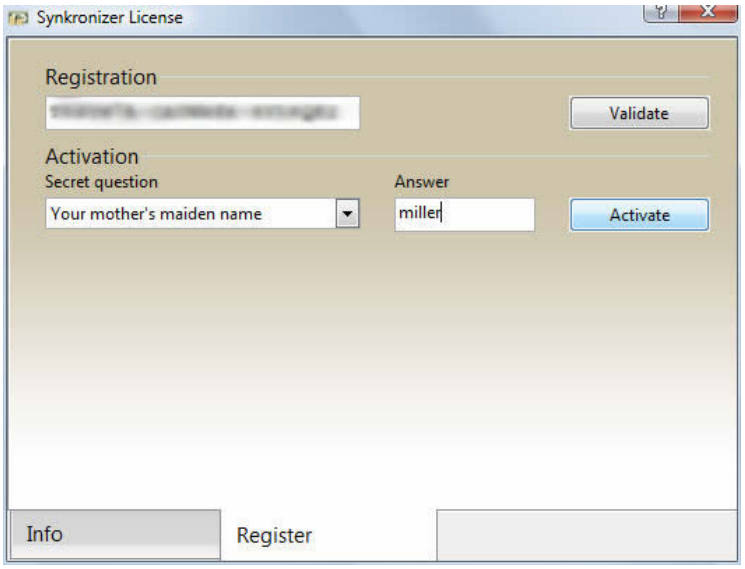
**Multiuser License**:
If you should install a multiuser license, an additional input field is displayed next to the registration key field (see below picture). This field contains the license number (sequential number from one to the number of purchased licenses). Be aware, that you enter in that field a number which not has be entered yet.




3. Please enter then the secret question. Click "Activate".




**Note**:
The security answer is an additional safeguard so that no one else can use your license. If you want to install your license on a second PC, you need to enter the same answer. The secret answer must be at least 5 characters long. The following characters are allowed: A-Z and 0-9.

4. The registration data is now sent to the activation server and the software is activated.
   If you should have no internet connection, you'll need to activate manually. Please read the chapter "Manual Activation".

If you have any problems with the registration/activation process please read the chapter Problems with registration.

### 2.6.1 Manual Activation

If no internet connection is available, the software needs to be activated manually via the Synkronizer

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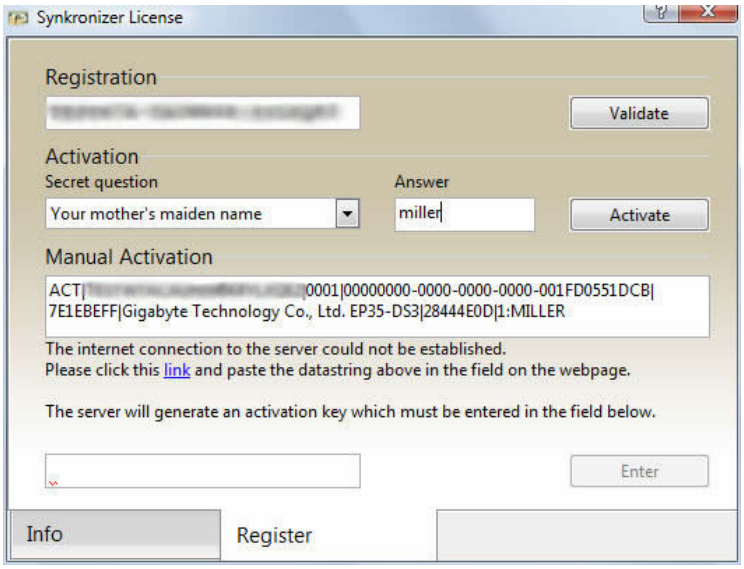
Activation Server.
This chapter explains how you can manually activate Synkronizer.

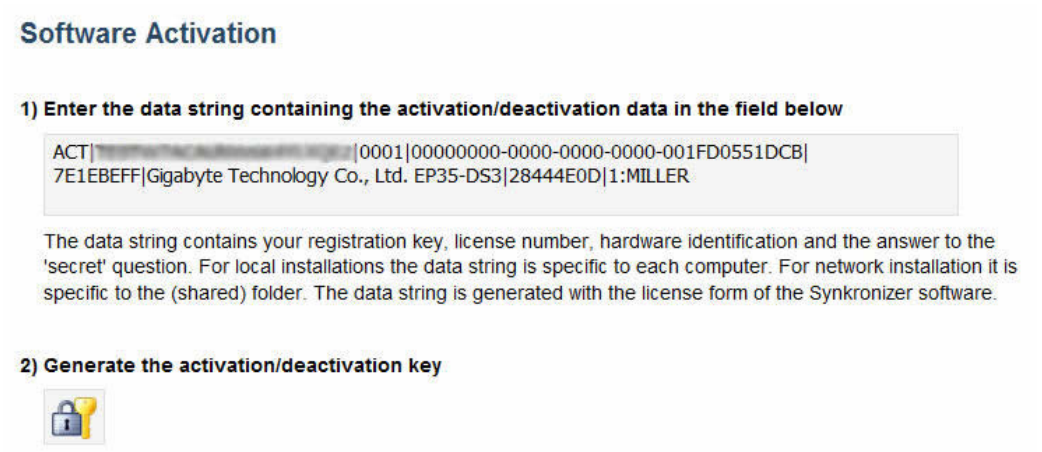
The registrations steps 1 to 3 are explained in the chapter Registration.

4. The "Manual Activation" screen appears, which contains the datrastring to be submitted to the activation server.




5. You'll need now to copy the datastring to a text document (e.g. Notepad).
   Open for this a textdocument and paste the datastring using the keys "CTRL-V".

6. Open the internet and enter the following link:
   http://www.synkronizer.com/scripts/activate.php?lang=en
   The software activation page is displayed:


Software Activation
1) Enter the data string containing the activation/deactivation data in the field below
ACT|0001|00000000-0000-0000-0000-001FD0551DCB|
7E1EBEFF|Gigabyte Technology Co., Ltd. EP35-DS3|28444E0D|1:MILLER
The data string contains your registration key, license number, hardware identification and the answer to the 'secret' question. For local installations the data string is specific to each computer. For network installation it is specific to the (shared) folder. The data string is generated with the license form of the Synkronizer software.
2) Generate the activation/deactivation key

7. Paste the datastring in the input field 1) and click on the activate symbol:

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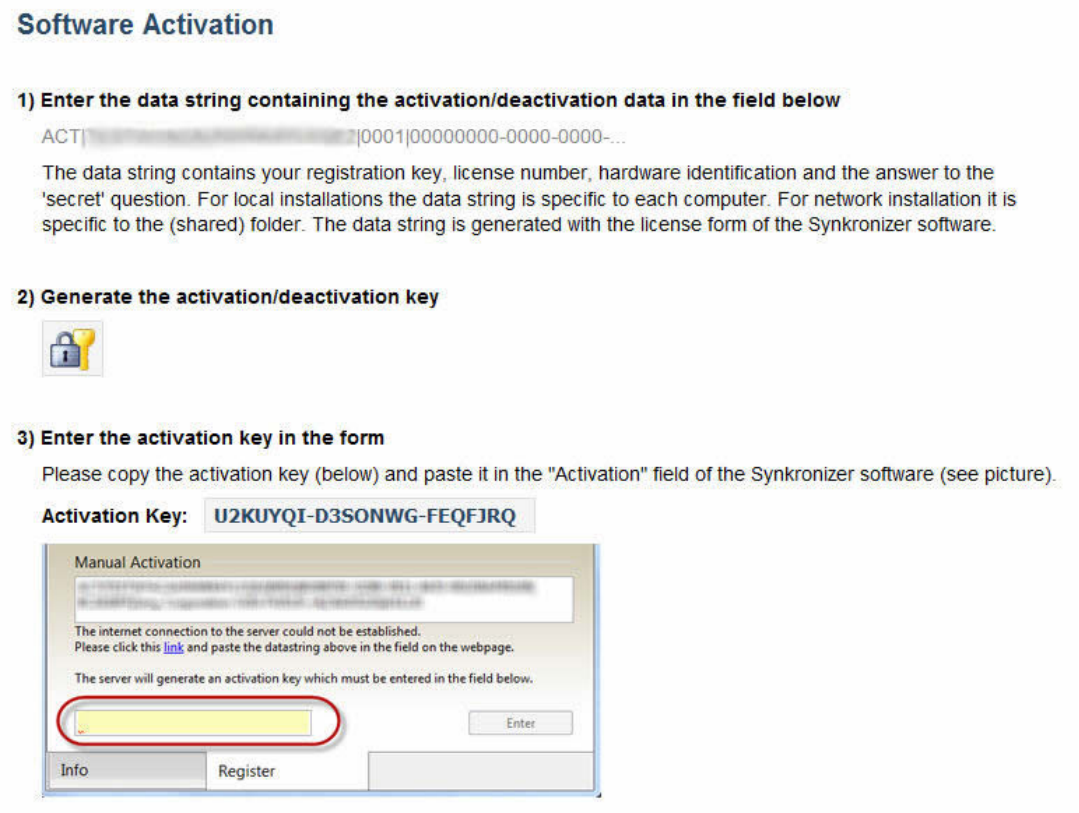
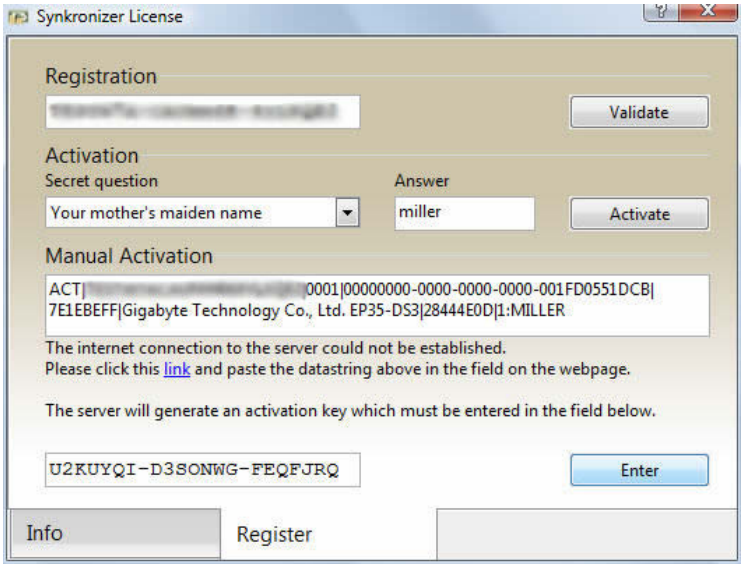

Software Activation
1) Enter the data string containing the activation/deactivation data in the field below
ACT|[redacted]|0001|00000000-0000-0000-...
The data string contains your registration key, license number, hardware identification and the answer to the 'secret' question. For local installations the data string is specific to each computer. For network installation it is specific to the (shared) folder. The data string is generated with the license form of the Synkronizer software.
2) Generate the activation/deactivation key
3) Enter the activation key in the form
Please copy the activation key (below) and paste it in the "Activation" field of the Synkronizer software (see picture).
Activation Key: U2KUYQI-D3SONWG-FEQFJRQ
Manual Activation
The internet connection to the server could not be established.
Please click this link and paste the datastring above in the field on the webpage.
The server will generate an activation key which must be entered in the field below.
Enter
Info
Register

8. Note the activation key and return to the license form of Synkronizer:




9. Enter the activation key in the input field and press "Enter".

10. The software is now activated.

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If you have any problems with the registration/activation process please read chapter "Problems with registration".

### 2.6.2 Deactivate Software

If you should purchase a new computer or should have problems with your current computer, you can transfer your license anytime to another computer. Just deactivate the license from the old computer before you can activate it on the new one.
Proceed as follows:

1. Start Synkronizer.

2. Select Project » Settings... » System » Registration/Activation.
   The welcome screen is displayed.

3. Select the tab "Manage".

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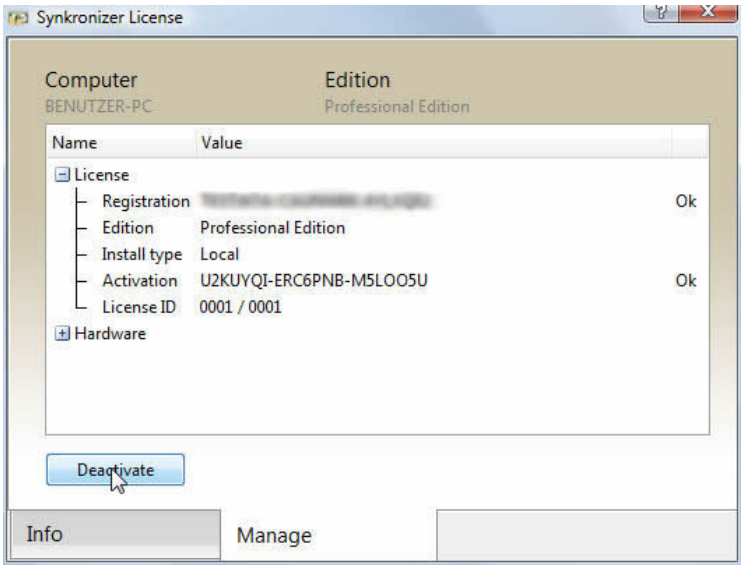


4. Click "Deactivate".

5. The software is deactivated.

If you should have no internet connection, you'll need to deactivate the software manually. A manual deactivation works exactly the same like the manual activation. The opnly difference is, that you'll get an unlock key instead of an activation key. Read this chapter for manually deactivating the software.
".

# 3 Tutorials

This section contains some tutorials to get familiar with Synkronizer:

1. Too many differences

2. Merge spreadsheets

3. Determine missing rows

## 3.1 Too many differences

**This tutorial explains how to minimize the number of differences using the filter function.**

When comparing cells Synkronizer first looks at the data type of the cells (Numbers/Text/Date/Boolean/ Error etc) and only then compares the actual content. If the data type and the content are not completely equal a difference will be reported.

Sometimes this is too precise for your purpose and you get too many differences.. e.g. you don't care about differences like "Customer" and "CUSTOMER" or 123 and "123"

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Then you can use Filters to instruct Synkronizer to be less precise. This page will show you how to do that.

1. Download the example files from the webpage:
   http://www.synkronizer.com/files/examplefiles.zip

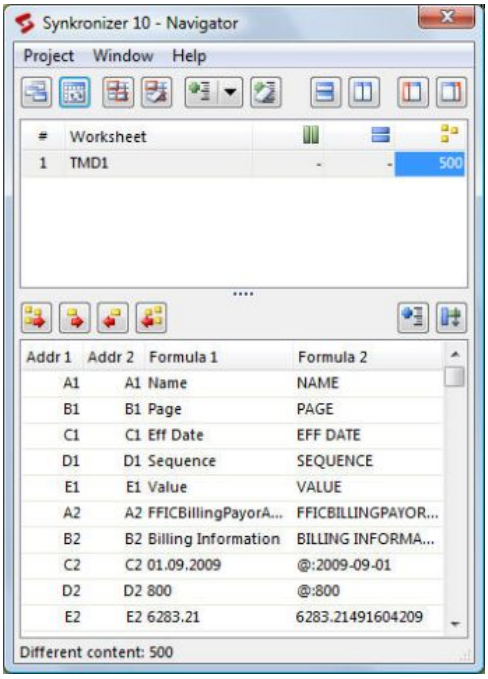
2. Extract the zip file and copy the Excel files to a folder of your preference.

3. Open Excel and start Synkronizer.

4. Select the files Master.xls and Update.xls.

5. Select the worksheets "TDM1" and "TDM2" and start then the comparison process.

6. The Navigator form is displayed which determined 500 differences:


Synkronizer 10 - Navigator
Project Window Help
# Worksheet
1 TMD1 500
Addr 1 Addr 2 Formula 1 Formula 2
A1 A1 Name NAME
B1 B1 Page PAGE
C1 C1 Eff Date EFF DATE
D1 D1 Sequence SEQUENCE
E1 E1 Value VALUE
A2 A2 FFICBillingPayorA... FFICBILLINGPAYOR...
B2 B2 Billing Information BILLING INFORMA...
C2 C2 01.09.2009 @:2009-09-01
D2 D2 800 @:800
E2 E2 6283.21 6283.21491604209
Different content: 500

7. As you scan see from the first couple of differences the data in the first files is "Proper" in the other it is "UPPER".
8. Let's set a filter to "Ignore the case". Open the menu Project » Settings.

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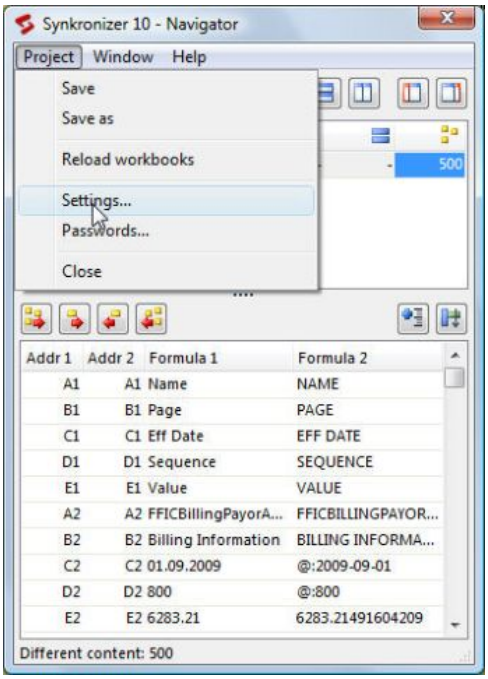
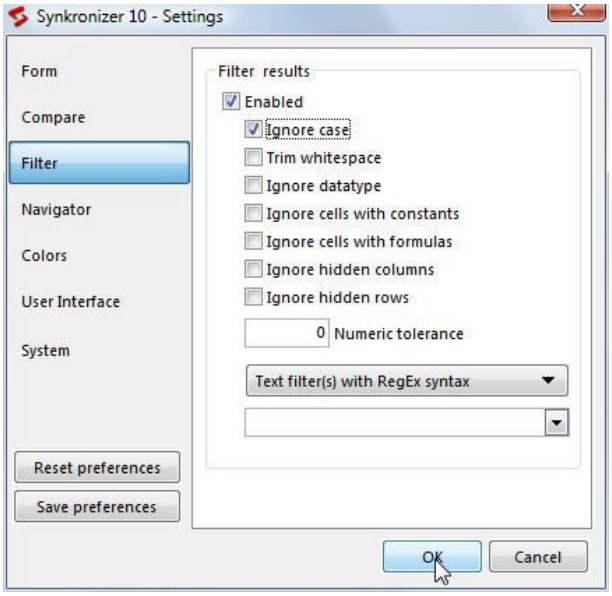



9. On the form Select "Filters". First check "Enabled" then check the Option "Ignore Case" Close the form by clicking the Ok button.




10. You go back to the Navigator form. Click the Button "Run the comparison again" (2nd button in the top row, see cursor)

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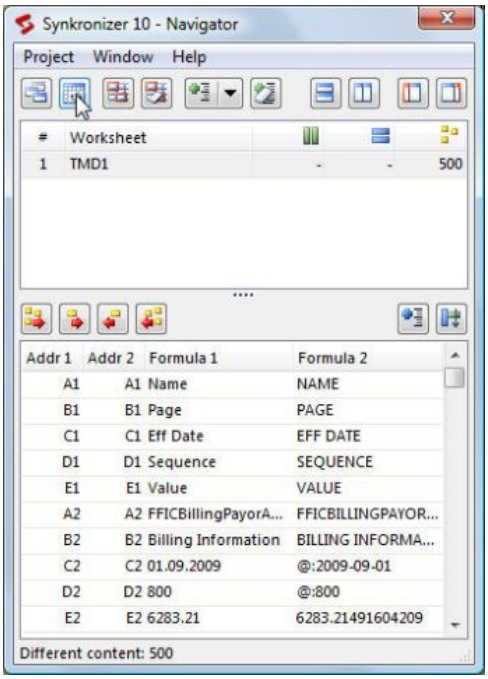
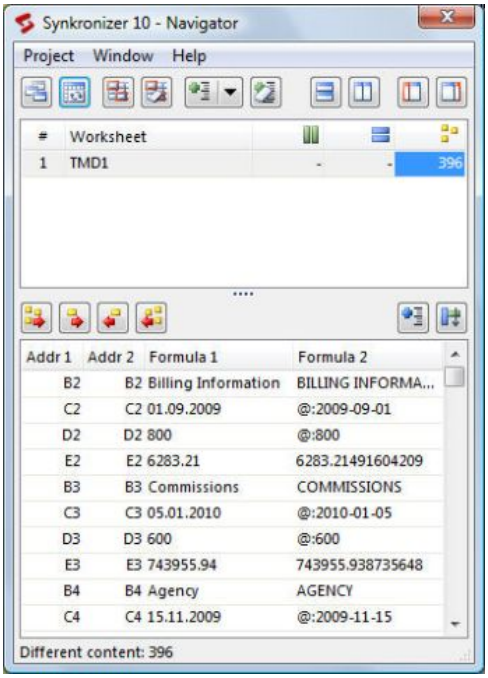

Synkronizer 10 - Navigator
Project Window Help
# Worksheet
1 TMD1 - - 500
Addr 1 Addr 2 Formula 1 Formula 2
A1 A1 Name NAME
B1 B1 Page PAGE
C1 C1 Eff Date EFF DATE
D1 D1 Sequence SEQUENCE
E1 E1 Value VALUE
A2 A2 FFICBillingPayorA... FFICBILLINGPAYOR...
B2 B2 Billing Information BILLING INFORMA...
C2 C2 01.09.2009 @:2009-09-01
D2 D2 800 @:800
E2 E2 6283.21 6283.21491604209
Different content: 500

11. We now have 396 differences left.


Synkronizer 10 - Navigator
Project Window Help
# Worksheet
1 TMD1 - - 396
Addr 1 Addr 2 Formula 1 Formula 2
B2 B2 Billing Information BILLING INFORMA...
C2 C2 01.09.2009 @:2009-09-01
D2 D2 800 @:800
E2 E2 6283.21 6283.21491604209
B3 B3 Commissions COMMISSIONS
C3 C3 05.01.2010 @:2010-01-05
D3 D3 600 @:600
E3 E3 743955.94 743955.938735648
B4 B4 Agency AGENCY
C4 C4 15.11.2009 @:2009-11-15
Different content: 396

12. Closer inspection will show that the differences in Column B are caused by trailing spaces in the "Update" file.
Repeat the steps 7-10 and add a check next to the filter option "Trim Whitespace". You should now have 297 differences left.

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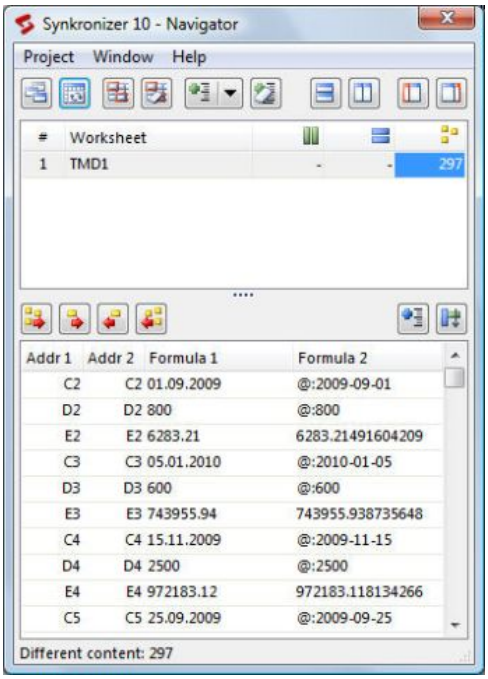
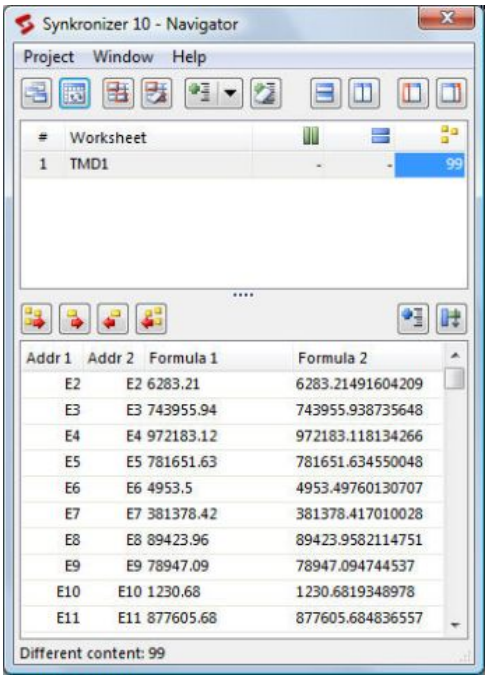



13. Now look at the differences. You'll notice that some cells are displayed with the @-sign. This is an indicator for cell content that is stored as text but can be converted to a Number, a Date or a Boolean. These differences can be filtered by ignoring the data type.
    Repeat the steps 7-10 and add a check next to the filter option "Ignore data type". You should now have 99 differences left.
    **[Remark: Ignore Datatype will only work if the text can be converted using the current system locale (regional settings)]**

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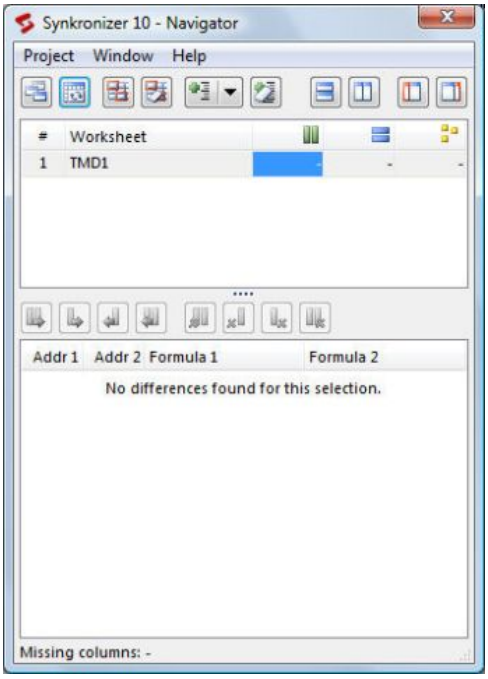
14. We now have only differences in column E remaining. You'll quickly see that the numbers in Master are rounded, but the numbers in Update are not.(although in the worksheet the extra precision is not displayed due to a number format). These differences can be ignored by setting a numeric tolerance. Go to the Filters page on the Settings form and set a value of 0.01 in the box for "Numeric Tolerance".


Synkronizer 10 - Navigator
Project Window Help
# Worksheet
1 TMD1
Addr 1 Addr 2 Formula 1 Formula 2
No differences found for this selection.
Missing columns: -

15. No more differences found!

## 3.2 Merge spreadsheets

**This tutorial explains how to merge different Excel spreadsheets.**

1. Download the example files from the webpage:
   http://www.synkronizer.com/files/examplefiles.zip

2. Extract the zip file and copy the Excel files to a folder of your preference.

3. Open Excel and start Synkronizer.

4. Select the files Master.xls and Update.xls.

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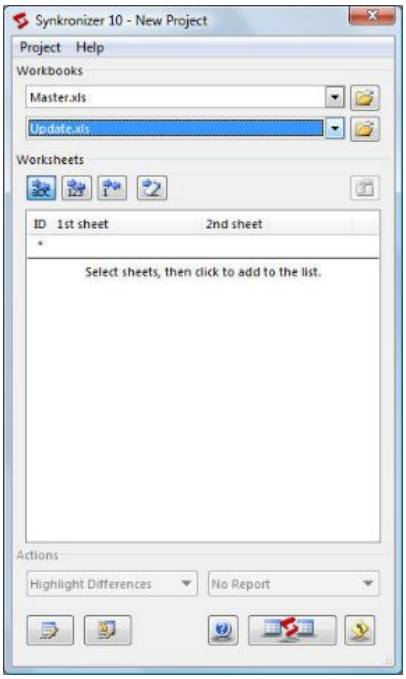
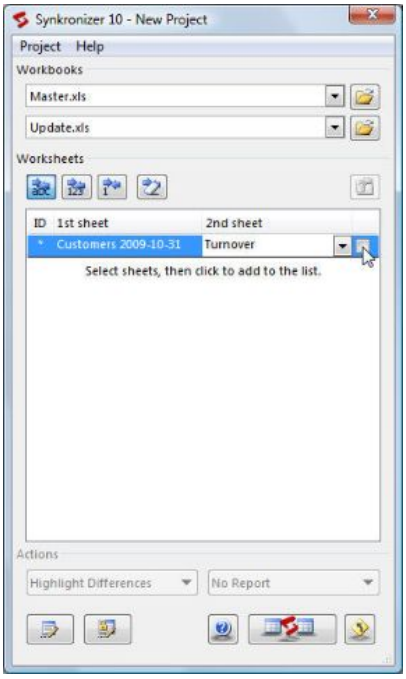



5. In the section "Worksheets" select the worksheets "Customers 2009-10-31" and "Turnover". Now click then on the checkbox (see cursor below).




The worksheets are added to the worksheet list.

6. In order to activate the database modus you need to double click on the worksheets or click on the database symbol (see cursor).

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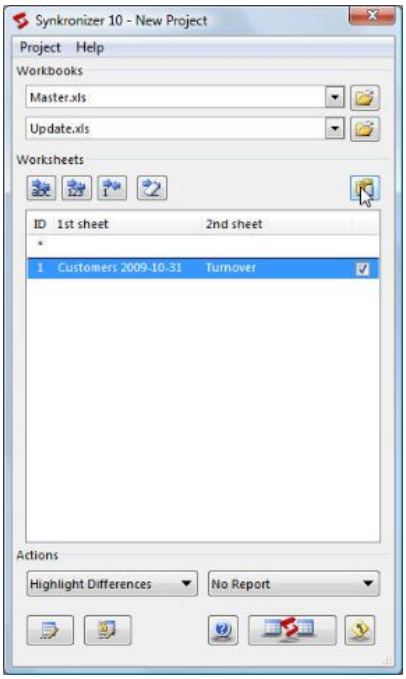
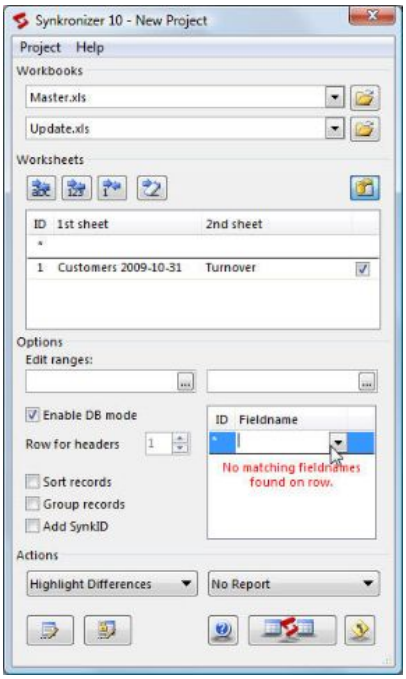



The options frame is now open.

7. Click "Enable DB mode" and select the primary key. Apparently, the Fieldname drop-down is empty (see cursor below). This means that no identical field names were found.

   For more information about the behaviour of databases and primary keys, please read chapter General information about databases.

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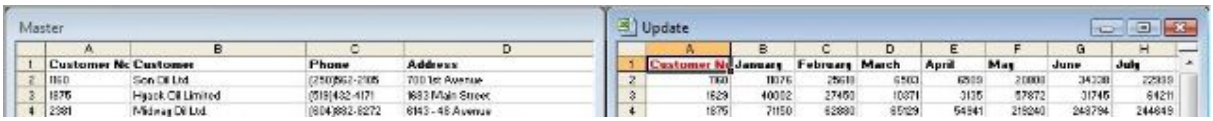
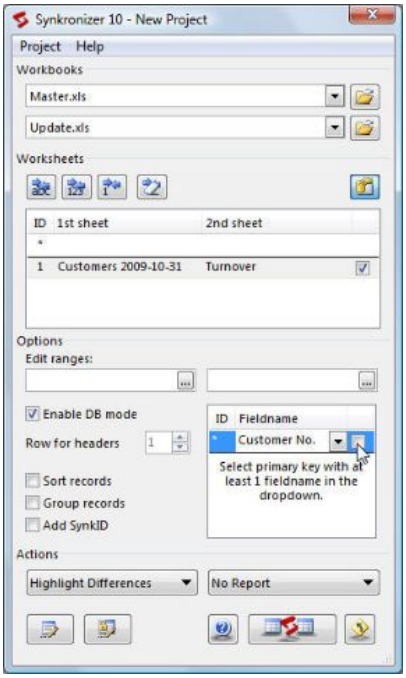
8. Close the Synkronizer form and check the field names of the files. Their databases have different field names ("Customer No." and "Customer #"). Change the caption of the spreadsheet "Turnover" to "Customer No.". Now you have an identical primary key!




9. Restart Synkronizer and select the database mode. You are able to select the primary key. Confirm the fieldname "Customer No." with a check (see cursor below).




10. Check "sort records" and start the comparison process (see cursor).

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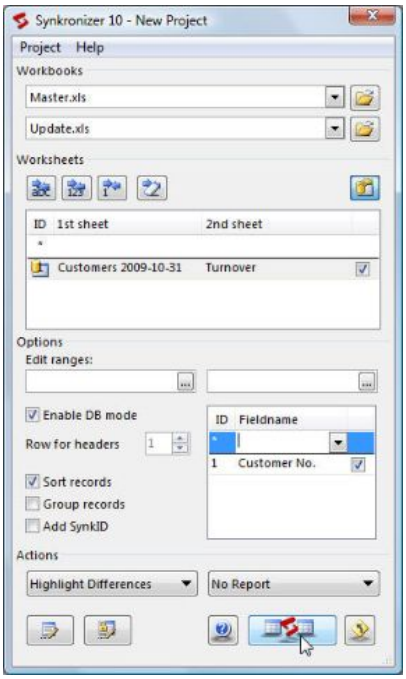
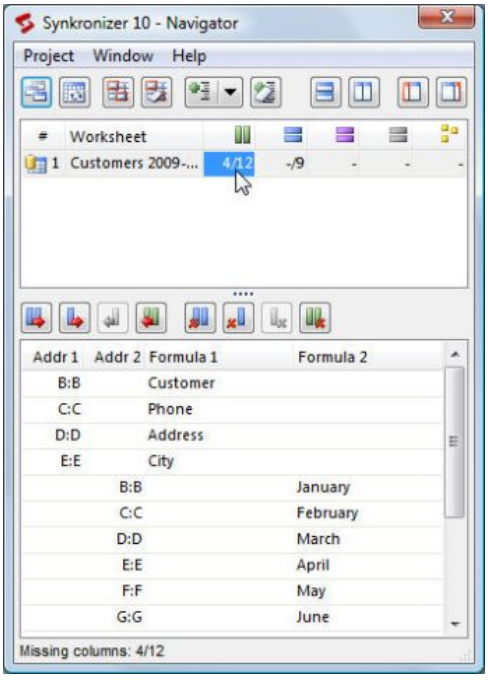



11. The Navigator form is now displayed. As you can see there are 4 missing columns in Master file and 12 missing columns in the Update spreadsheet found (see highlighted cell below).




12. Now we want to merge the spreadsheets by transferring the missing columns from Update to the Master-spreadsheet. If you want to transfer just one column, click on the desired column and the transfer button (see illustration below).

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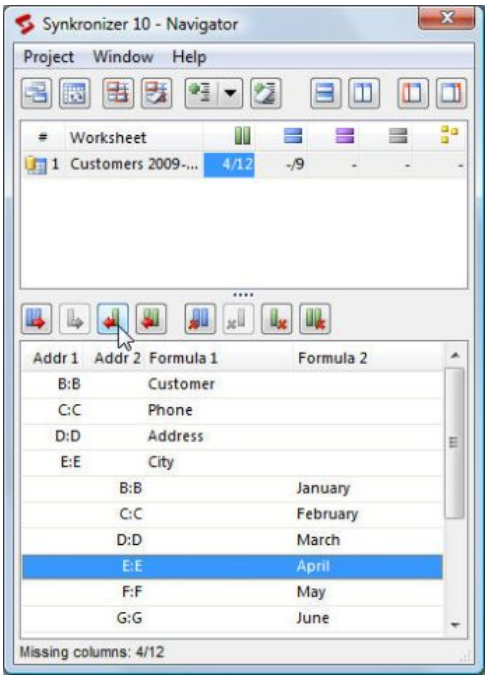
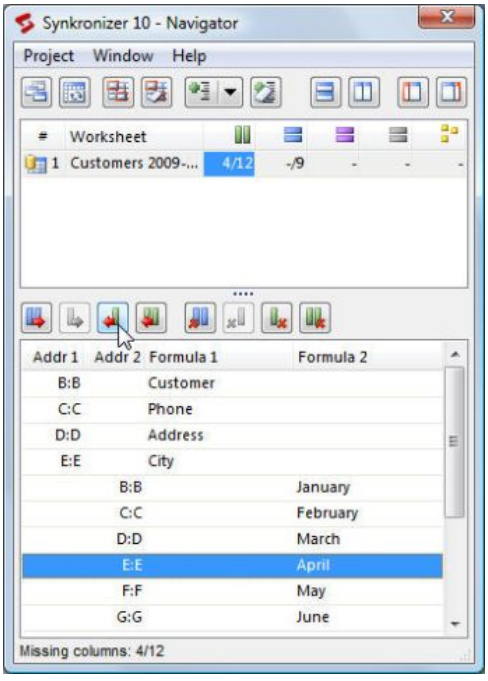



13. Alternatively, you can transfer all columns by one click. The corresponding button is shown in below illustration.




The spreadsheets are now merged. You can close the Navigator.

## 3.3 Determine missing rows

**This tutorial explains how missing (or different) rows of two Excel spreadsheets can be**

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**recognized.**

When you are working with large sheets, your differences can be "all over the place". With the navigator you can "jump" from one difference to the next but you want overview, and concentrate on (for instance) the rows that were added or deleted.

Synkronizer allows you to only display specific differences(e.g. missing rows) and blend out the remaining parts, so your differences appear together on your screen.

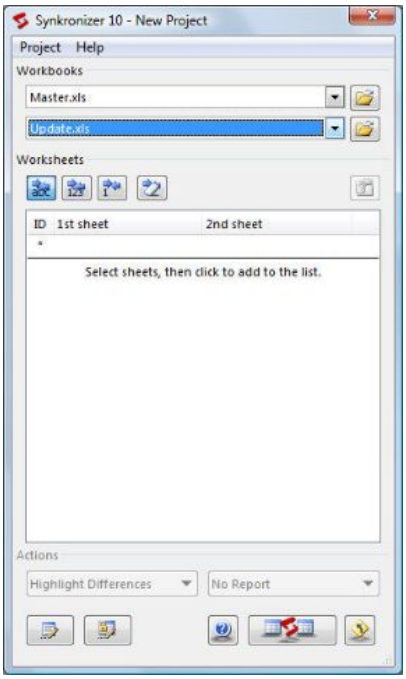
This page will show you how to efficiently use the "Show/Hide" tool.

1. Download the example files from the webpage:
   http://www.synkronizer.com/files/examplefiles.zip

2. Extract the zip file and copy the Excel files to a folder of your preference.

3. Open Excel and start Synkronizer.

4. Select the files Master.xls and Update.xls.




5. In the section "Worksheets" select the worksheets "Customers 2009-10-31" and "Customers 2009-11-30". Now click then on the checkbox (see cursor).

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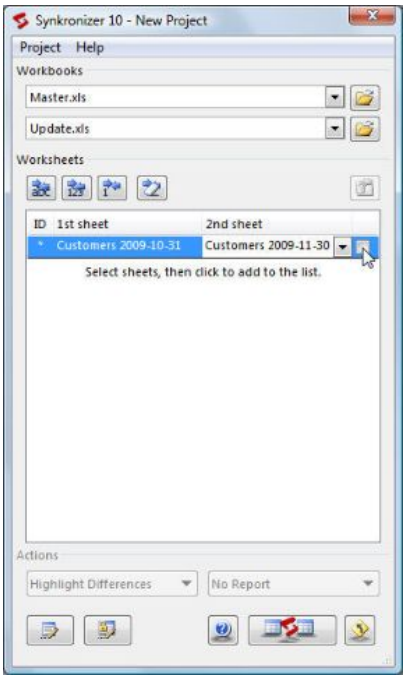
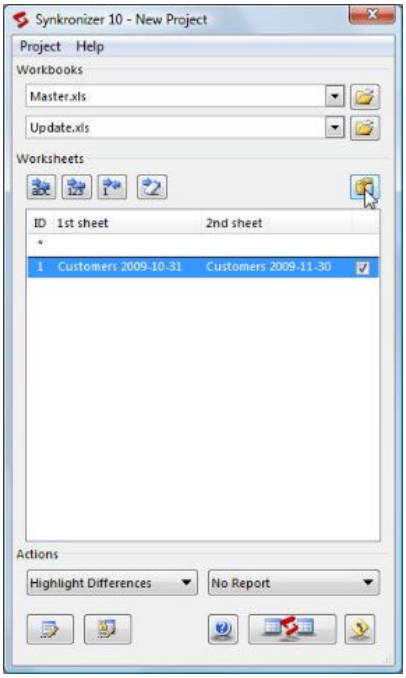



The worksheets are added to the worksheet list.

6. In order to activate the database modus you need to double click on the worksheets or click on the database symbol (see cursor).




The options frame is now open.

7. Click now "Enable DB mode" and select the primary key "Customer No." in the list box "Fieldnames".

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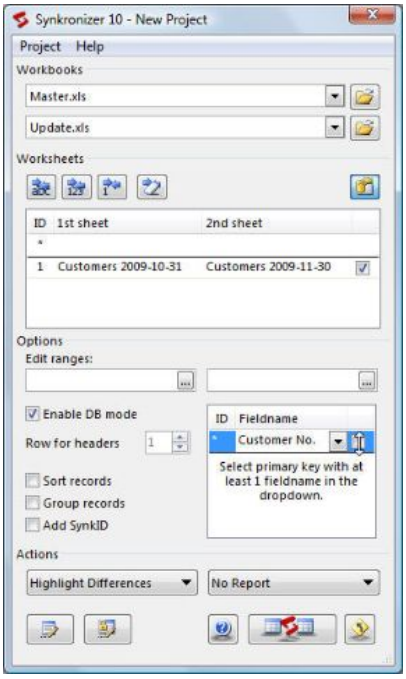
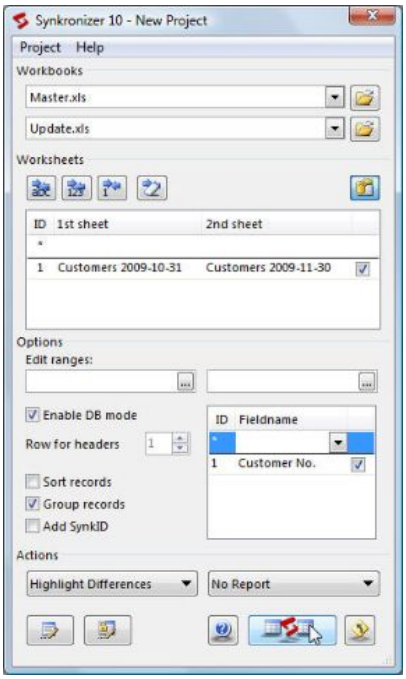
Add the primary key with a check (see cursor).

For more information about the behaviour of databases and primary keys, please read chapter "General information about databases".




8. Click on "Group records" (this ensures that all missing rows are grouped together).




Start the comparison (see cursor above.)

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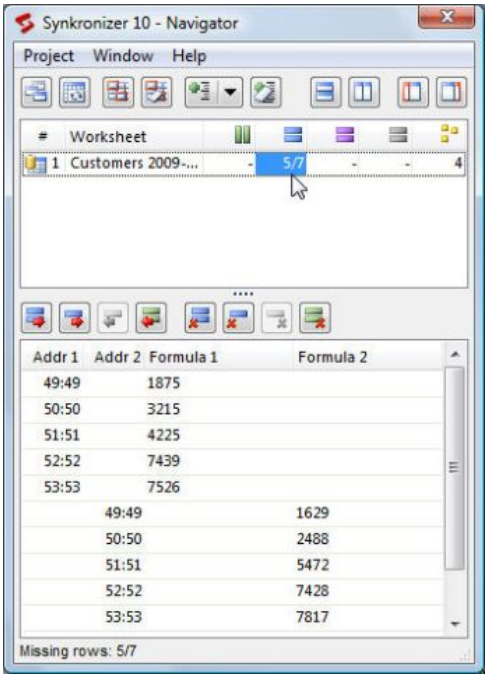
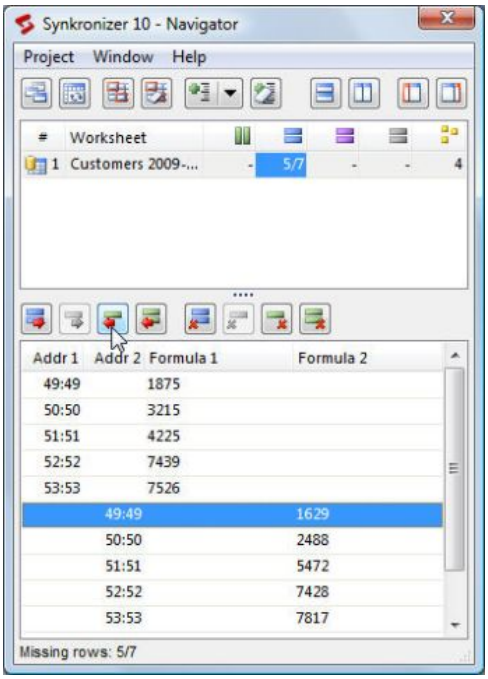
9. The Navigator is now displayed. As you can see, Synkronizer found 5 different rows in the Master file and 7 different rows in the Update file (see cursor, caption 5/7).




10. If you like, you can now update the worksheets (transfer differences from left to right or vice versa). For this, just select the desired differences and click on the update buttons (see cursor below).




11. If you prefer to show the missing rows only, click with the cursor on the arrow of the "Show/Hide"-

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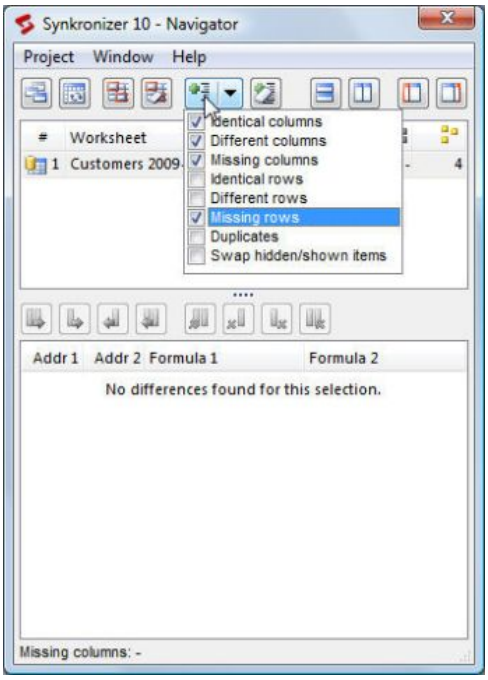
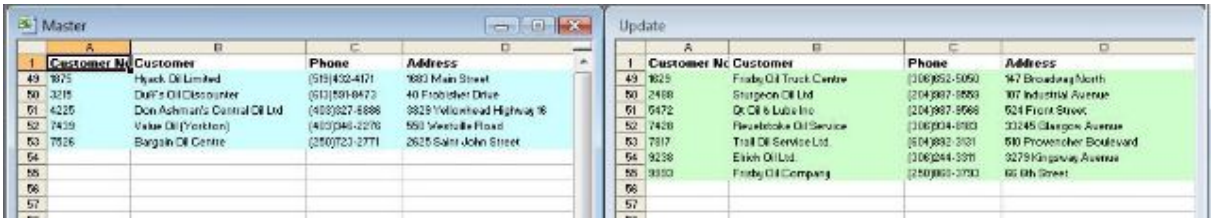
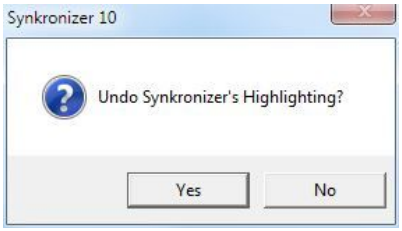
symbol and select all columns and "Missing rows". Click then on the "Show/Hide"-button (see cursor below). The rows will be hidden and/or displayed now.




12.You can see the missing rows only (and all columns).




13.When you close the Navigator form you will be asked if the Synkronizer highlighting should be removed or not. Press "No".
*Note: the default response to this dialog can be set in Settings..*

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# 4 Forms

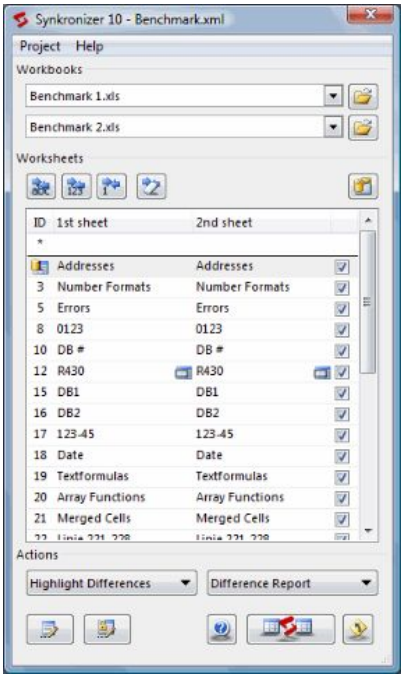
## 4.1 Projects

Synkronizer is started as follows:

**Excel 2007**
Menu Reviews » Synkronizer 10

**Excel XP, 2003**
Tools menu » Synkronizer 10

The main form of Synkronizer 10 appears




In this form, the main settings are set. Further settings are set in the form Settings

### 4.1.1 Projects

A project holds a configuration of files, pairs of worksheets and settings (filters etc). Project files can be saved so you can easily manage your recurring comparisons.
The following commands are available from the Projects Menu:

**New**
Clears the main form. Settings revert to the defaults specified in settings, files and pairs are emptied.

**Open**
Opens an project file from disk and loads the files, pairs and settings.

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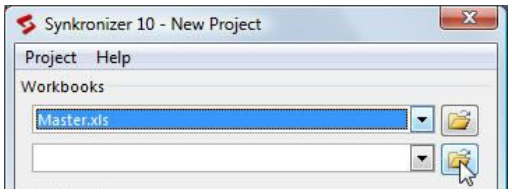
**Save**
Saves current settings as a project (including the selection of the Excel files)

**Save as**
An existing project or current settings can be stored as a new project under a new name

**Note**
Important, by default passwords are not stored in the project file. For more detailed information please study the chapter Passwords

### 4.1.2 Files




In the main form the files to be compared are selected. This step is performed for each file by clicking on the "open file" icon. Alternatively, the files can also be selected with the drop-down buttons. If you click that button a list of all recently compared and recently opened Excel files appears

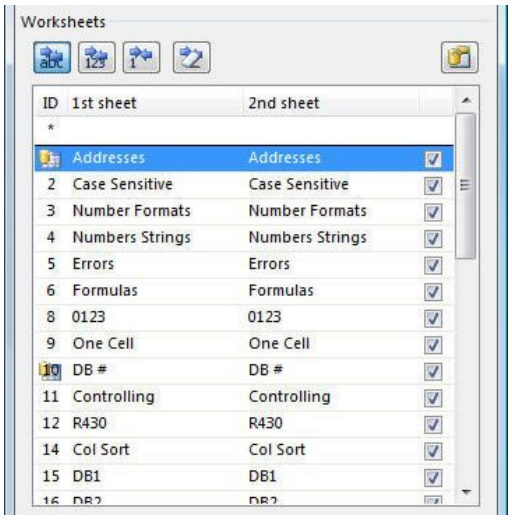
**Projects**

Files can also be opened by the use of a project using the menu (Project » Open). For more detailed information see chapter Projects.

**Supported file types**

All files, which are supported by Microsoft Excel can be opened with Synkronizer 10

### 4.1.3 Worksheets

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This form lists all worksheet "pairs" that are to be compared. The worksheets can be paired automatically or manually

### Match / remove worksheets automatically

The following buttons are available to add / remove the worksheet couples:

All worksheets of the workbooks are matched by name

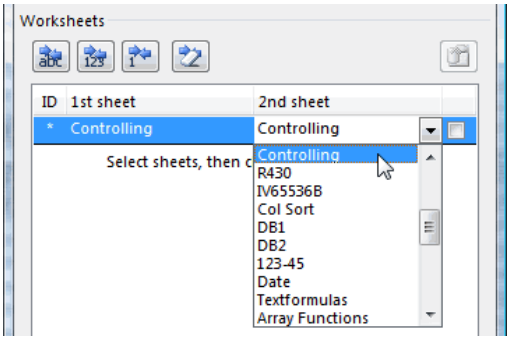
All worksheets of the files are matched by index

The first worksheets of the files are matched

All worksheet pairs are removed from the list

### Match worksheets manually

The worksheets can be matched manually. This is done in the header of the worksheet list box:




In the row marked with a star, there are two drop down-boxes (see illustration). With these fields the required worksheets can be selected. The selection has to be confirmed by selecting the checkbox to the right and the pair of worksheets will be included in the list

### Remove worksheet pairs manually

If you do not want to compare all pairs of worksheets, you can remove the unwanted pairs with the "Delete" button. As a further option, the worksheet "couples" can be removed by clicking with on the checkbox at the right side (see picture below)

Once the box is unchecked, the worksheet "couple" disappears from the list

### No worksheets found

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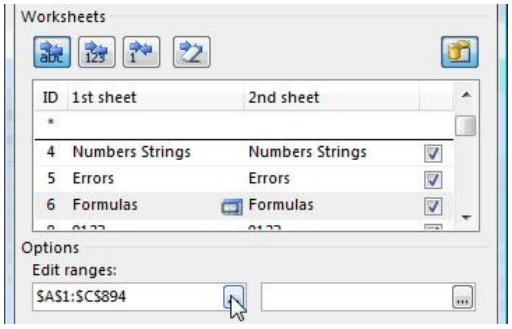
If no worksheets are available in the drop-down lists, the worksheets are either protected, empty and/ or hidden. In this case, you need to change the display mode for worksheets. For more detailed information please refer to the chapter Settings » Main Form

#### 4.1.3.1 Ranges

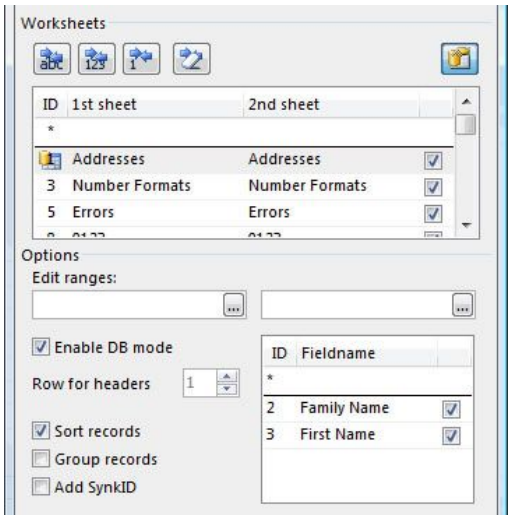



If you do not want to compare the entire table, you can define the desired range. Proceed as follows:

1. Select the worksheet which contains the range you want to compare
2. Select the button "Edit ranges and database options" (icon to the right) or double-click on the pair of worksheets you want to edit. The option field appears
3. Select "Edit ranges" to set the desired range
4. The range icon is now displayed to the right of the worksheet

**Note**:
You can also enter named ranges. Multiarea ranges are not allowed.

#### 4.1.3.2 Databases




If the worksheets you want to compare are in a database structure, we recommend to employ a database comparison. If you do not know exactly what is a database and how it works, please read first the chapter General information on databases

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Proceed as follows to enter the database options:

1. Select the worksheet "couple" containing the databases
2. Select the button "Edit ranges and database options" (icon to the right) or double-click on the pair of worksheets, which must be edited. The option field appears
3. Click "Enable DB mode"
4. Select with the field "Row for headers" the row on which there are the field names in the database (normally row 1)
5. Build the primary key using the DropDown "Fieldname". Confirm the selection by clicking on the checkbox.

   **Important:**
   **The field names must have identical names, otherwise the database can not be linked!**
6. The database icon appears in the worksheets list

In addition the below options can be selected

**Sort records**

The data is sorted by the primary key

**Group records**

The data is sorted by the primary key, but grouped. First, the linked records are listed, then the added/ deleted rows and last but not least the duplicate keys/records

**Add SynkID**

To the right of the databases a new column entitled "**SynkID**" will be added. This column contains the various difference types. You can then sort and/or filter (auto filter) the databases by the differences types. The following captions are written in the SynkID column:

0-Key Duplicate key
0-Dup Duplicate record (redundant record)
1-Rec Missing row
2-Val Different cell value(s)/formula(s)
2-Fmt Different cell formatting(s)

#### 4.1.3.2.1 General information about databases

Prior to describing the types of differences we want to give a brief definition of "normal" worksheets versus a database

**"Normal" worksheets**

do not contain column headings and no database structure. For such worksheets, Synkronizer performs a cell-by-cell comparison. As a frequent user of Synkronizer you will soon learn that the data

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comparison of a "normal" worksheets is not as efficient as a database comparison

**Databases**

are worksheets that contain data within a database structure. The data must be arranged as follows:

- The first row contains unique column names
- The database contains one (or more) column(s) with **primary key(s)** (unique identification number, article number etc.). A primary key uniquely identifies each data records and facilitates the sorting and synchronizing of your data. The primary key does not need to be a single field (e.g. employee number). It can be constructed with multiple fields (e.g. family name, first name and city) to create a unique identifier and avoid duplicate keys/records

Below paragraphs describe the difference between a 'duplicate key' and 'duplicate records'

**Duplicate keys**

Duplicate keys are data records, which contain the same primary key. Assuming the primary key is formed from the family and first name, if you have several customers called "John Miller" in your database, Synkronizer will not know which data records should be compared. Make sure you operate with unique primary keys when working with Synkronizer

**Duplicate Records (Redundant records)**

Synkronizer also checks whether your database contains duplicate records (or redundant records). These are records where all fields (not just the key fields) are equal. If found these records will be highlighted in gray. Duplicate records do not serve any purpose and should be deleted

The comparison of "databases" is a fast. The databases may be sorted or altered. The inserting and deleting of columns and rows is allowed. Synkronizer will recognize all differences between the two files

#### 4.1.3.3 Link data 1 on 1

If you are sure that your worksheets contain no deleted or inserted columns/rows, you can check the fields "Link 1 on 1 for columns/rows". This overrides the linking algorithms.

Proceed as follows to link the data 1 on 1:

1. Select the worksheet "couple" containing the desired data
2. Select the button "Edit ranges and database options" (icon to the right) or double-click on the pair of worksheets, which must be edited. The option field appears

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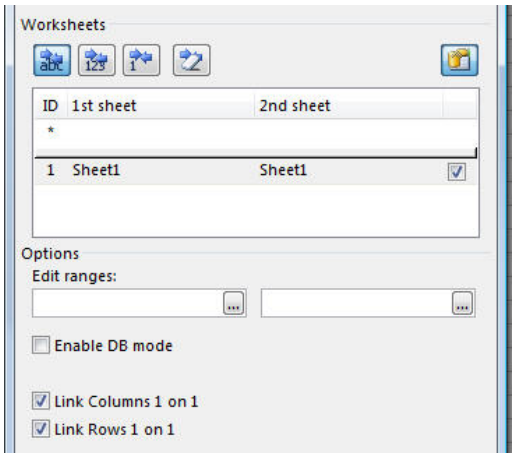


3. The following checkboxes appear

   Link Columns 1 on 1 and
   Link Rows 1 on 1

4. Click on the desired checkboxes and start the comparison.

### 4.1.4 Settings

In the main form the most important information such as files, tables, etc. is defined. If you want to define additional information, you have to open the Settings form. The Settings form can be opened with the menu command Project » Settings or the button depicted on the left

For more detailed information please refer to the chapter Settings

### 4.1.5 Passwords

Password-protected worksheets can be compared and a difference report can be created, but the differences can not be highlighted, hidden or transferred. These actions can only be executed when you enter the passwords of the protected worksheets. To enter the passwords just click on the button shown to the left. The following forms appears

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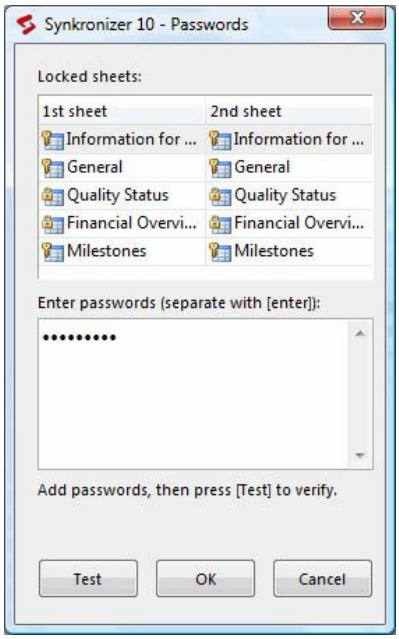


In this form, all password-protected worksheets are listed. In the bottom of the form the required passwords can be entered.

**Test passwords**

With the "Test"-button, you can check whether you entered the correct passwords. If you have entered the correct passwords, the locks will be replaced by a key in the symbols (see the first pair of worksheets)

**Passwords in projects**

By default passwords are not saved in the project file. If you do want to store passwords in your projects you have to change a registry setting. Note that passwords are not stored in readily legible form, but the obscuring routine is not difficult to reverse engineer. If you want the convenience of storing passwords with your projects, you have to open the registry and select the following key:

`HKEY_CURRENT_USER\Software\Synkronizer Software\Synkronizer\10.0`
Select the entry `ProjectsPasswords` and change the value to 1. The passwords will now be stored (and loaded) when you save or open a project file.

**Problems with password-protected worksheets**

**Protected worksheets can be compared without a password and without problems EXCEPT when they contain cells that have the "Hidden" checkbox on the Protection tab turned on. In this case Synkronizer MAY return inaccurate results because not all cell information can be read correctly. With the unlocking of these worksheets (potential) problems can be avoided.**

Also note that the Navigator may not be able to highlight, select or update cells or ranges if the sheets

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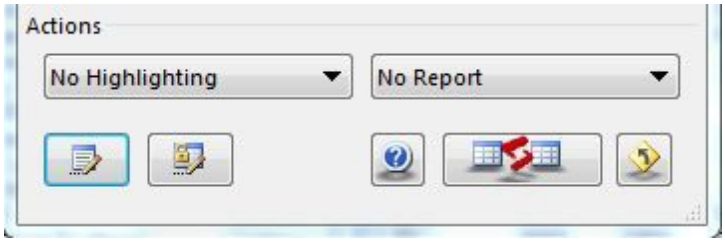
are protected and password is not provided.

### 4.1.6 Actions

If you have set all comparison options, you can determine what actions you want Synkronizer to perform. The following two buttons are available:




**Highlight Differences (left button)**

With the left button it is determined whether differences are to be highlighted or not. The following options exist:

- **No Highlighting:** No differences are highlighted
- **Highlight Differences:** The differences are highlighted in the worksheets
- **Clear and Highlight:** The differences are highlighted in the worksheets. Before highlighting all the background highlighting are removed.

**Create Difference Report (right button)**

With the right button, you can specify whether a difference report should be created. The following options are available:

- **No Report:** No difference report is generated
- **Difference Report:** An Excel difference report is generated
- **Hyperlinked Report:** An Excel difference report with hyperlinks is generated
- **XML Report:** An XML difference report is generated.

If all settings and actions have been taken, the comparison of the worksheets can be started with the button shown on the left

#### 4.1.6.1 Highlight Differences

If you choose this action the differences in all underlying worksheets are highlighted:

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| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Teilnamen | Aez | MM_Nr | TE | AG | D | Ba | TIEFE | SEITE | Aen | Bemerkung | O_ID |
| 2 | | | | | | | | | | | | |
| 3 | G1012001_17_00 | | 0001.00 | | 0400 | 149.6 | S | | A | | | -46 |
| 4 | G1012001_17_00 | | 0001.00 | BDX | 0800 | 149.6 | Vd | | I | n | | 501 |
| 5 | G1012001_17_00 | | 0001.00 | BDX | 1000 | 150 | Fb | | PW | n | | 502 |
| 6 | G1012001_17_00 | | 0001.02 | EFX | 0400 | | F | | A | | | 560 |
| 7 | G1012001_17_00 | | 0001.02 | | 0800 | | F | | A | | | -87 |
| 8 | G1012001_17_00 | | 0001.11 | IMX | 0800 | 8.5 | B | | A | n | | 503 |
| 9 | G1012001_17_00 | | 0001.11 | IMX | 0800 | 10 | G | | A | n | | 504 |
| 10 | G1012001_17_00 | | 0001.12 | IMX | 0800 | 8.5 | B | | A | n | | 506 |
| 11 | G1012001_17_00 | | 0001.12 | IMX | 0800 | 10 | G | | A | n | | 507 |
| 12 | G1012001_17_00 | | 0001.13 | IMX | 0800 | 8.5 | B | | A | n | | 509 |
| 13 | G1012001_17_00 | | 0001.13 | IMX | 0800 | 10 | G | | A | n | | 510 |
| 14 | G1012001_17_00 | | 0001.14 | IMX | 0800 | 8.5 | B | | A | n | | 512 |
| 15 | G1012001_17_00 | | 0001.14 | IMX | 0800 | 10 | G | | A | n | | 513 |
| 16 | G1012001_17_00 | | 0001.15 | | 0800 | 11.7 | B | | A | | | -127 |
| 17 | G1012001_17_00 | | 0001.15 | BSF | 0800 | 14.5 | S | | A | n | | 515 |
| 18 | G1012001_17_00 | | 0001.15 | BSF | 1000 | 15 | R | | PW | n | | 516 |
| 19 | G1012001_17_00 | | 0002.00 | | 0400 | 83 | F | | A | | | -14 |
| 20 | G1012001_17_00 | | 0002.00 | | 0400 | 95 | F | | A | | | -15 |
| 21 | G1012001_17_00 | | 0002.00 | | 0400 | 140 | F | | A | | | -16 |
| 22 | G1012001_17_00 | | 0002.00 | | 0800 | 135 | F | | A | | | -112 |
| 23 | G1012001_17_00 | | 0002.00 Gummi | BDX | 0400 | 142.2 | S | | A | | | 564 |
| 24 | G1012001_17_00 | | 0003.00 | BDX | 0400 | 138 | S | | A | n | | 517 |
| 25 | G1012001_17_00 | | 0003.00 | BDX | 0800 | 139.6 | Vd | | I | n | | 518 |
| 26 | G1012001_17_00 | | 0003.00 | BDX | 1000 | 140 | Fb | | PW | n | | 519 |
| 27 | G1012001_17_00 | | 0003.01 | IMX | 0800 | 6.8 | B | | A | n | | 520 |
| 28 | G1012001_17_00 | | 0003.01 | IMX | 0800 | 8 | G | | A | n | | 521 |
| 29 | G1012001_17_00 | | 0003.02 | IMX | 0800 | 6.8 | B | | A | n | | 523 |
| 30 | G1012001_17_00 | | 0003.02 | IMX | 0800 | 8 | G | | A | n | | 524 |
| 31 | G1012001_17_00 | | 0004.00 | BDX | 0400 | 138 | S | | A | n | | 526 |
| 32 | G1012001_17_00 | | 0004.00 | BDX | 0800 | 139.6 | Vd | | I | n | | 527 |
| 33 | G1012001_17_00 | | 0004.00 | BDX | 1000 | 140 | Fb | | PW | n | | 528 |

The differences are highlighted in the following colors:

- light blue for deleted columns/rows
- light green for added columns/rows
- yellow for different cell values/formulas
- orange for different cell formattings
- lilac for duplicate keys (only database mode)
- gray for duplicate records (redundant records) (only database mode)

At one glance Synkronizer clearly displays all differences and you can decide with which version of the worksheet you wish to proceed

The colors listed above are the default values, you can specify your own color settings, see the chapter Settings » Colors

**Cells with Conditional Formattings**

If Synkronizer finds different cell values (or formulas) in cells with conditional formatting, then the cells can not be marked. In this case, Synkronizer draws a diagonal line in the corresponding cell

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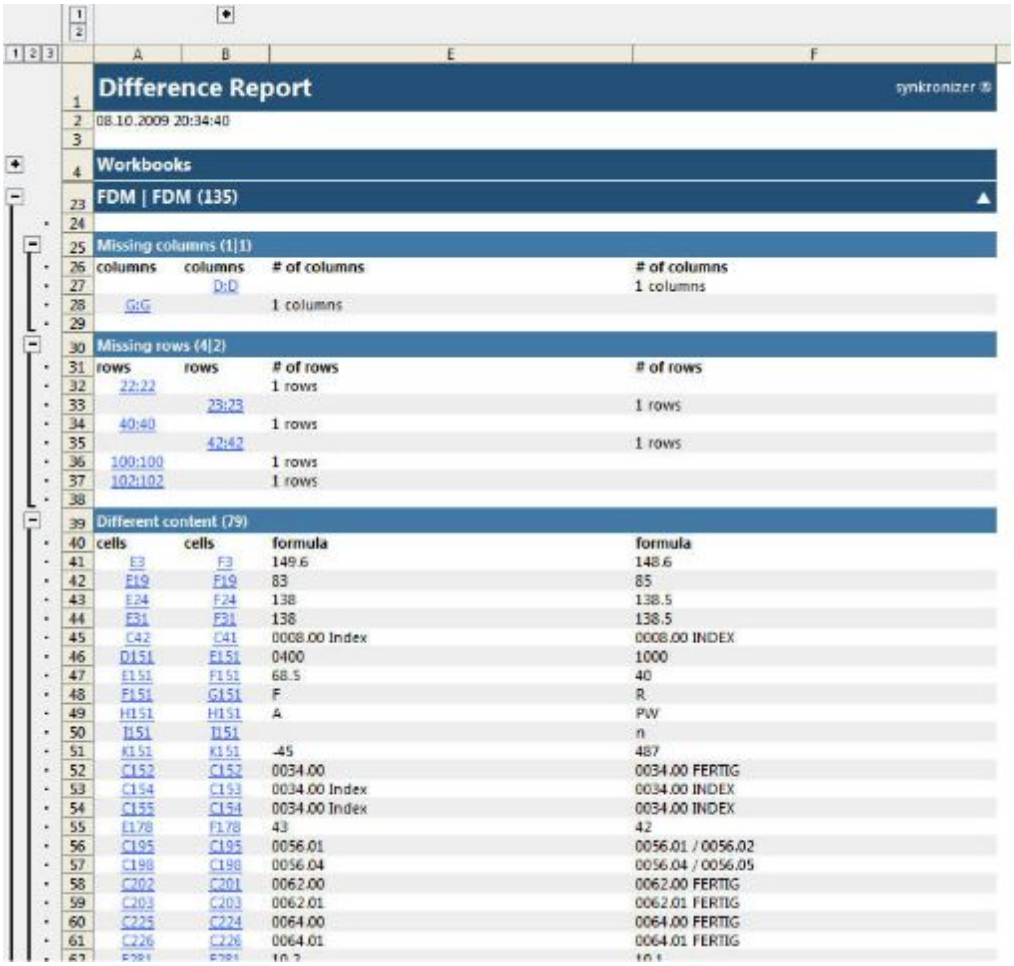
#### 4.1.6.2 Create a Difference Report

If desired, you can display the result of the comparison in a reader friendly difference report. On this report you see the rows or columns deleted and/or added, and each cell with a different value. The difference report displays the values entered in worksheet 1 and worksheet 2. This report is a great help in tracing differences and updating your Excel files.



| | A | B | E | F |
|---|---|---|---|---|
| 1 | **Difference Report** | | | synkronizer |
| 2 | 08.10.2009 20:34:40 | | | |
| 3 | | | | |
| 4 | **Workbooks** | | | |
| 23 | **FDM \| FDM (135)** | | | |
| 24 | | | | |
| 25 | **Missing columns (1\|1)** | | | |
| 26 | columns | columns | # of columns | # of columns |
| 27 | | D:D | | 1 columns |
| 28 | G:G | | 1 columns | |
| 29 | | | | |
| 30 | **Missing rows (4\|2)** | | | |
| 31 | rows | rows | # of rows | # of rows |
| 32 | 22:22 | | 1 rows | |
| 33 | | 23:23 | | 1 rows |
| 34 | 40:40 | | 1 rows | |
| 35 | | 42:42 | | 1 rows |
| 36 | 100:100 | | 1 rows | |
| 37 | 102:102 | | 1 rows | |
| 38 | | | | |
| 39 | **Different content (79)** | | | |
| 40 | cells | cells | formula | formula |
| 41 | E3 | F3 | 149.6 | 148.6 |
| 42 | F19 | F19 | 83 | 85 |
| 43 | E24 | F24 | 138 | 138.5 |
| 44 | F31 | F31 | 138 | 138.5 |
| 45 | C42 | C41 | 0008.00 Index | 0008.00 INDEX |
| 46 | D151 | E151 | 0400 | 1000 |
| 47 | E151 | F151 | 68.5 | 40 |
| 48 | F151 | G151 | F | R |
| 49 | H151 | H151 | A | PW |
| 50 | I151 | I151 | | n |
| 51 | K151 | K151 | -45 | 487 |
| 52 | C152 | C152 | 0034.00 | 0034.00 FERTIG |
| 53 | C154 | C153 | 0034.00 Index | 0034.00 INDEX |
| 54 | C155 | C154 | 0034.00 Index | 0034.00 INDEX |
| 55 | E178 | F178 | 43 | 42 |
| 56 | C195 | C195 | 0056.01 | 0056.01 / 0056.02 |
| 57 | C198 | C198 | 0056.04 | 0056.04 / 0056.05 |
| 58 | C202 | C201 | 0062.00 | 0062.00 FERTIG |
| 59 | C203 | C203 | 0062.01 | 0062.01 FERTIG |
| 60 | C225 | C224 | 0064.00 | 0064.00 FERTIG |
| 61 | C226 | C226 | 0064.01 | 0064.01 FERTIG |

## 4.2 Settings

In the settings form the remaining settings be defined. See below sections for descriptions of the various settings

**Save/Reset Preferences**

You can configure Synkronizer to your needs. With the buttons "Save Preferences" and "Reset Preferences" you can save or reset the settings to the default set-up

**Differences between Application and Project Settings**

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In this form you can define application and project settings. Below are the differences of those explained

- If no project is active, the application settings are displayed in all forms
- If a project is active, the first three menus (Main Form, Compare and Filter) contain the project settings, in the other menus the applications are displayed
- If settings are changed in the first three menus and you press then the 'Ok'-button, these settings are saved in the project. Changes in the other menus have no effect on the projects

### 4.2.1 Main Form

On this page, the default values of the main form can be defined. You can determine how the main form should behave when Synkronizer is started or a new project is opened

**Select how sheets are matched:**
Here you specify how the worksheets should be matched when a new project is created

**Select to include in selection and lists:**
In this section you can determine which worksheet types can be compared.

**Actions: Highlight differences / Create difference report:**
Use these buttons to set the actions to be executed by default.

**Important:**
If no project is active (or empty), the default settings are displayed. If a project is active then the project settings are shown

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## 4.2.2 Compare

In this form, you can specify how Synkronizer shall compare the worksheets

**Compare cell contents**

Here you can determine whether Synkronizer compares the data by formulas or values. If you do not know the difference between these comparison types, please first read the chapter "Differences between formulas and values"

**Compare cell formatting**

If cell formats should be compared, you can select the desired format by clicking the appropriate check boxes

Comments on the use of comparing cell formats:
- Only cell formats within the data range is compared
- The comparison works properly only if both files use the same style
- The comparison by format slows the comparison process

**Important:** If no project is active (or empty), the default settings are displayed. If a project is active then the project settings are depicted

### 4.2.2.1 Differences between formulas and values

Below example illustrates the difference between values and formulas. The sales for the month of January changed from US$ 10.00 to US$ 10.50. Therefore the turnover of the 1st Quarter raises also

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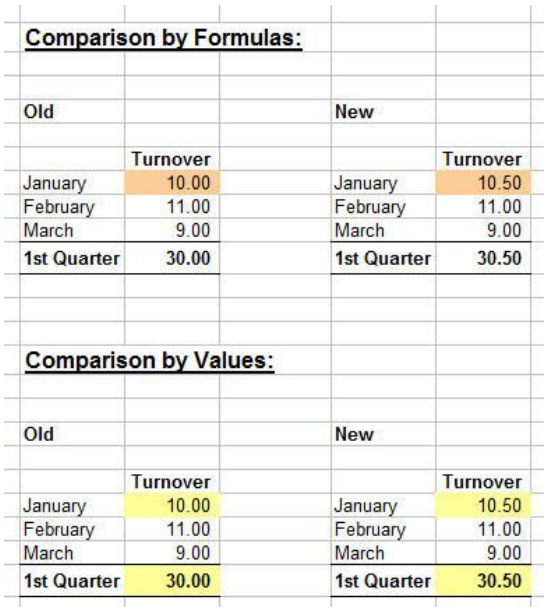
from US$ 30.00 to US$ 30.50.



**Comparison by Formulas:**

| Old | | New | |
|---|---|---|---|
| | Turnover | | Turnover |
| January | 10.00 | January | 10.50 |
| February | 11.00 | February | 11.00 |
| March | 9.00 | March | 9.00 |
| 1st Quarter | 30.00 | 1st Quarter | 30.50 |

**Comparison by Values:**

| Old | | New | |
|---|---|---|---|
| | Turnover | | Turnover |
| January | 10.00 | January | 10.50 |
| February | 11.00 | February | 11.00 |
| March | 9.00 | March | 9.00 |
| 1st Quarter | 30.00 | 1st Quarter | 30.50 |

**Comparison by Formulas**

If you compare the worksheets by formula, only the month of January is recognized as a difference, because the cell 1st Quarter contains an identical formula

**Comparison by Values**

If, however, a comparison by values is performed, Synkronizer recognizes two differences, as the month of January and the 1st Quarter have different values

### 4.2.3 Filter

In this area you can determine whether you want to apply a filter to the data or not

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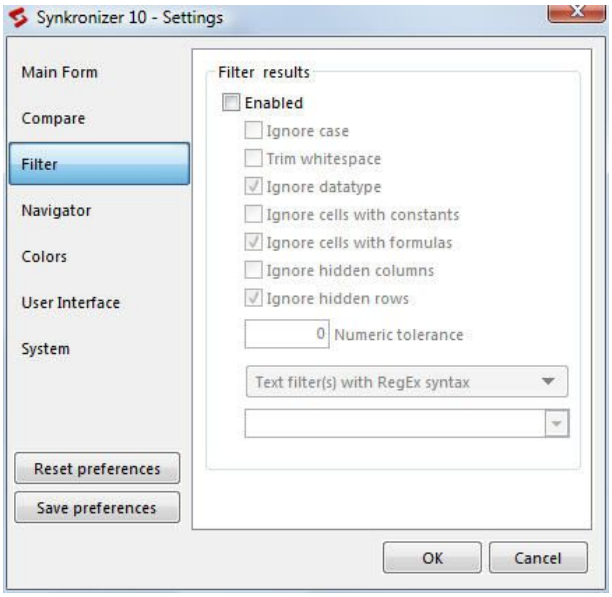


You can define multiple filters by clicking on the desired check boxes. With the checkbox "Enabled" the filters will be activated. Important: If you have selected filters, but "Enabled" is not checked, the cell values/formulas are not filtered.

**Ignore case**

If this field contains a check, Synkronizer ignores differences between small and capital letters (e.g. "John Miller", "JOHN MILLER").

**Trim whitespace**

If you select the "Trim whitespace" option Synkronizer removes spaces at the beginning and end of the cell entries and comments before comparing them. Thus "John Miller" and "John Miller " (with trailing spaces) will be considered the same. You can use this to ignore the differences between empty cells and cells with spaces only

**Ignore datatype**

It is possible that the numbers are formatted in a one worksheets as a number, in the other as text. With this option, these differences are ignored.

Note: If date values are shown in one worksheet as date and in the other as a number, then these are formatting differences. These differences can by recognized with the setting Compare » Compare cell formatting » Number

**Ignore cells with constants / formulas**

If one of these options is active, all cells with constants (values) or formulas are ignored

**Ignore hidden columns / rows**

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If you click on these check boxes, the hidden columns and/or rows are not compared. Obviously, this option is only effective if the columns/rows in both tables are hidden

**Numeric Tolerance**

Normally numeric tolerance is 0. All differences between numeric entries are reported. Synkronizer allows you though to ignore small differences. Set numeric tolerance to 0.01 to ignore differences of 1 cent or smaller

**Text Filter**

With a text filter you can choose to ignore specific differences. Choose between VBA's 'like' operator or a RegEx pattern for Microsoft VBScript Regular Expressions (if installed on your system)

Following are a few examples of how to use a TextFilter:

- In a project file the cells with 'Done' should be ignored.
  Syntax: Like. TextFilter: 'Done' (or [Dd]one if you want)

- In a project file the cells with 'Todo' or 'Done' should be ignored.
  Syntax: RegEx. TextFilter: 'Todo|Done'

- In a database the fields with 'New York' or 'Los Angeles' should be ignored.
  Syntax: RegEx. TextFilter: 'New York|Los Angeles'

Note: Case sensitivity for text-filters depends on Ignore Case option. If you want to filter a date, then you must enter the numerical value of the date, e.g. the 1 January 2010 corresponds to the number 40179

**Important:** If no project is active (or empty), the default settings are displayed. If a project is active then the project settings are shown

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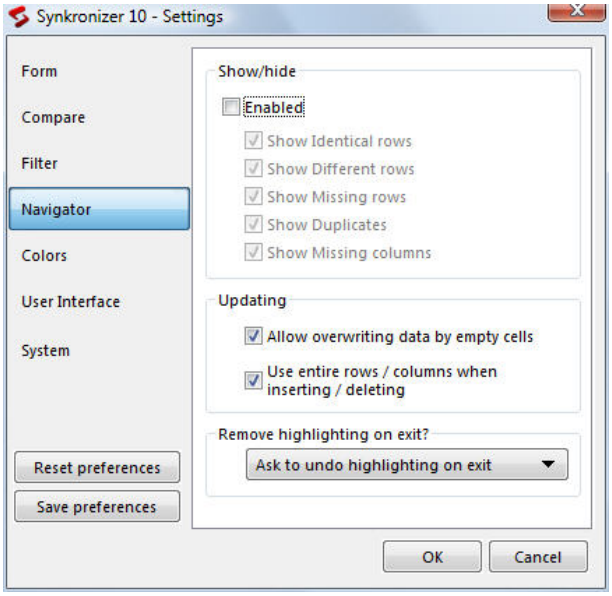
### 4.2.4 Navigator




**Show/hide**

When enabled Synkronizer shows or hides selected entries after comparison

**Allow overwriting data by empty cells**

If this option is selected all differences are updated. Unselect this option to prevent cell contents being overwritten with blank (empty) content from the other file

**Use entire rows / columns when inserting / deleting**

Normally only the rows within the data range are inserted/deleted by transferring/deleting rows (or columns). If this checkbox is active, the whole row/column are inserted/deleted

**Remove highlighting on exit?**

Here you can specify whether Synkronizer highlighting shall be removed or not when you exit the Navigator. The following options are available:

- **Ask to undo highlighting on exit:** A message box appears whether Synkronizer should remove the highlighting.
- **Never undo highlighting on exit:** The highlightings remain preserved
- **Always undo highlighting on exit:** The Synkronizer highlightings are removed when closing the form, with the old background colors restored. Your background colors won't be lost!

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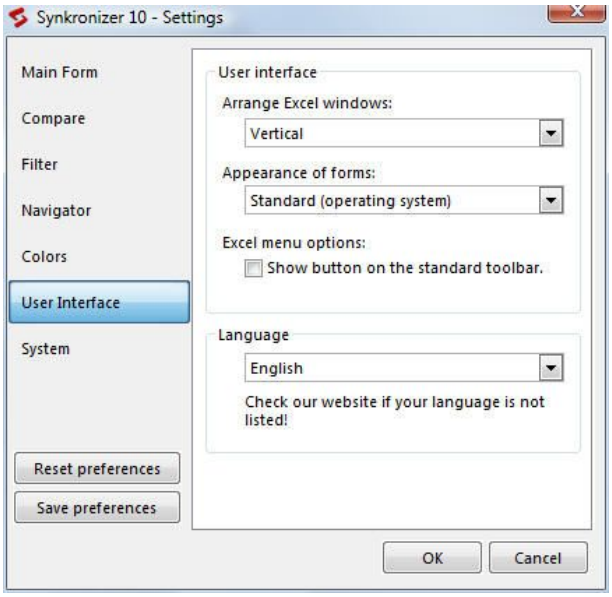
### 4.2.5 Colors

In this section you can determine the colors with which Synkronizer highlights the differences. In addition, you can customize the colors of the difference report

### 4.2.6 User Interface




**Arrange Excel windows**

Here you can determine whether the worksheets should be tiled vertically or horizontally

**Appearance of forms**

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With this drop down field you can determine how the layout of the forms (background, buttons, etc.) should look like. Synkronizer offers a number of different layout styles

**Excel menu options**

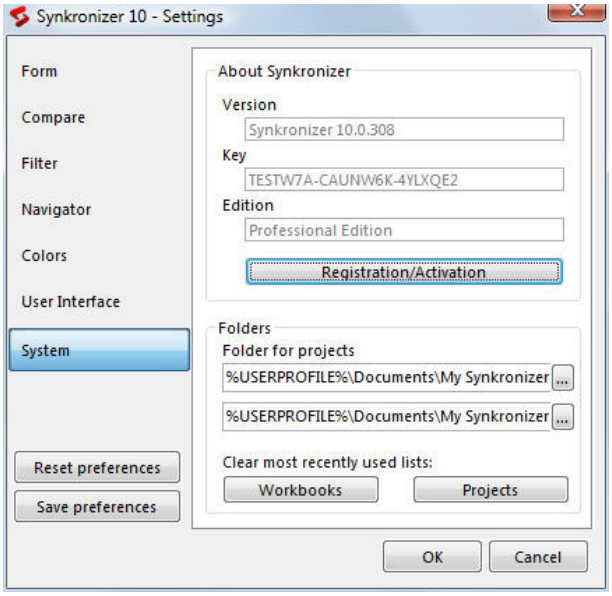
If you select this check box, the Synkronizer icon appears on the Standard toolbar of Excel

**Language**

With this field you can specify the language. Important: If your language is not included, we offer a developer version for free, if you translate the language of the Synkronizer GUI (Graphical User Interface) to a not yet available language. Please contact us via the contact form to receive detailed instructions

## 4.2.7 System

In this area the system will be set




**About Synkronizer**

In this window, the Synkronizer version information is provided

**Registration/Activation**

Click this button to activate or upgrade the software

**Folder for projects**

In this directory, the project files are saved or opened

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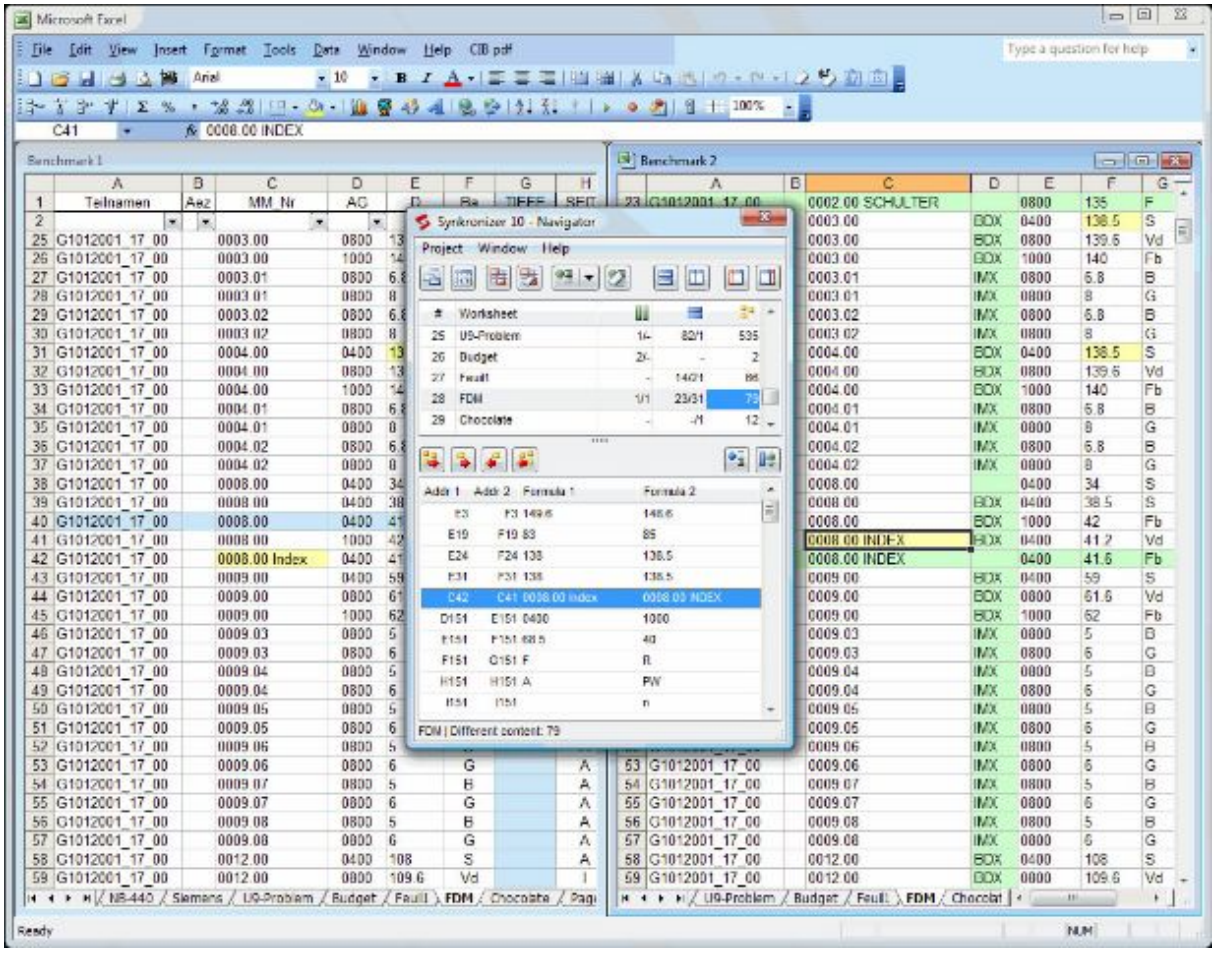
**Clear most recently used lists**

If you click on these buttons the recently opened files and projects will be deleted

## 4.3 Navigator

After completion of the comparison process the worksheets are displayed vertically or horizontally and a user-friendly form is displayed. This form, the navigator, allows you to navigate through all differences




Synkronizer displays both worksheets next to each other and as such lets you compare the differences directly. At this point you may decide with which version you wish to continue. With mouse-clicks you can transfer values from spreadsheet 1 to spreadsheet 2 or vice versa. This is the most efficient way to eliminate all differences. Your Excel worksheet is perfectly updated very quickly

The Navigator form is divided into two parts. The upper part shows all differences per pair of worksheets, the lower part displays the details

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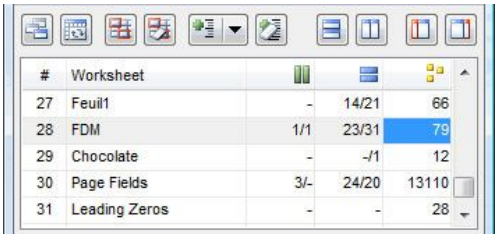
**Actions**

The navigator can perform the following actions:

- Overview of differences
- Synchronize worksheets / transfer differences
- Delete unwanted differences
- Show/hide differences

## 4.3.1 Overview

In the upper part of the Navigator, the worksheets and their differences are displayed. At one glance you can see how many differences exist




For example in that screenshot you can see that the following differences were detected in worksheet "FDM":

| | |
|---|---|
| Missing columns | 1/1; (one missing column in Master and one missing column in Update) |
| Missing rows | 23/31; (23 missing rows in Master and 31 missing rows in Update) |
| Different values/ formulas | 79 different formulas/values |

In the columns of the list box various differences are shown. The difference types are as follows

- Missing columns
- Missing rows
- Duplicate keys (only database mode)
- Duplicate records (redundant records, only database mode)
- Different cell values/formulas
- Different cell formats (only displayed by formatting comparison)

**You can view the detailed information for each difference by clicking on the difference your interested in. The detailed information will appear in the lower part of the form**

**Description of the icons in the toolbar**

**Re-compare worksheets**
With these buttons you can repeat the comparison the worksheets without closing the Navigator. This comes very handy when wanting to update differences and to know whether

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or not there are still differences. If all worksheets are to be compared, the left icon must be locked. If this symbol is not locked, however, only the selected worksheet will be compared. With the right icon, a new comparison is started

**Highlight / remove differences**
With the left symbol differences are highlighted. With the right icon, the Synkronizer highlighting's are removed, with the original background colors restored

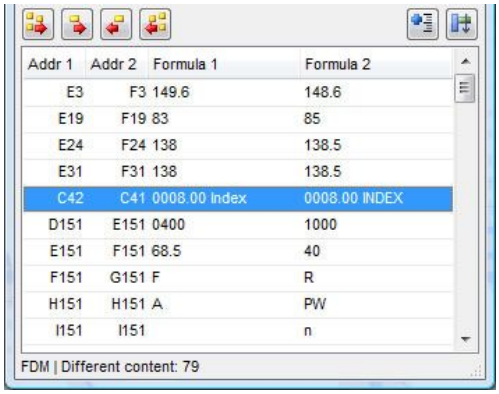
**Show/hide differences**
With these two symbols the differences can be shown or hidden. To view specific differences, proceed as follows:
1. Press the arrow of the left icon and select the differences you want to be shown/hidden
2. Click the plus sign of the left of the symbol; the differences will be shown/hidden
3. When all differences are to be shown again, click the right button again

**Arrange windows**
With these two button you can change between a horizontal and a vertical view

**Dock Navigator form**
Normally, the navigator form is shown above the Excel worksheets. With these buttons you can dock the Navigator form at the left or right of the Excel worksheets

## 4.3.2 Detail Information

In the lower part of the form, the details are displayed, which were selected in the upper part:




With that list-box you can transfer, update or delete unwanted differences. The following buttons are available

**Transfer missing rows from 1st to 2nd worksheet**
With these buttons you can transfer the missing rows from the 1st to the 2nd worksheet (from left to right). Either all or only the selected row will be transferred. Once the row has been transferred, it is shown in red

These commands are also available in different columns

**Transfer missing rows from 2nd to 1st worksheet**

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Same function as above

**Delete missing rows of 1st worksheet**
With these buttons you can delete the missing rows of the 1st worksheet. Either all or only the selected line will be deleted

These commands are available in different columns, duplicate keys and duplicate records

**Delete missing rows of 2nd worksheet**
same function as above

**Transfer cell differences from 1st to 2nd worksheet**
With these buttons you can transfer different cell values, formulas or formats from the 1st to the 2nd file (transfer from left to right). There will be transferred either all or only the selected cell difference. Once the cell difference was transferred, it is shown in red

These commands are also available in different cell formats

**Transfer cell differences from 2nd to 1st worksheet**
same function as above

**Sort cell differences**
The cell differences are by default sorted by rows and within rows by columns. Use this button to change the sorting

This command is also available in different cell formats

**Group cell differences**
Each cell difference is individually presented. When you click this button, the cell differences in each row or column are grouped (depending on the sorting, see above). This comes very handy when you want to transfer all cell differences of a column with one click

This command is also available in different cell formats

**Show/hide grouped cell differences**
If the cell differences are grouped, the "Details Icon" is displayed. Use this button to show or hide the cell differences within the columns and rows

This command is also available in different cell formats

**Differences which are displayed with a @-character**

If a cell contains a text (string) that can be interpreted as a number, date or boolean variable (True/ False) a @: indicator is shown. E.g. the number 123 formatted as text is shown @:123.

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# 5 Project File

## 5.1 FileFormat

The Project file is a simple XML text file that can be edited with any standard text editor such as notepad.
When manually editing XML files be aware that the names of tags are Case-sensitive. Misspelling will cause failures.

**Tip:**
prepare your project using the Synkronizer form, save it, then edit it to suit your needs.

This is the layout of the file for a project where sheets are auto matched, without any options set for any of the pairs.
You'll notice that there are no individual pairs listed inside the <Pairs> tag..

```
<?xml version="1.0" standalone="yes"?>
<Synkronizer>
   <Project ID="1">
      <Settings>
         <CompareType>0</CompareType>
         <Formats>0</Formats>
         <Filters>0</Filters>
         <FilterTolerance>0</FilterTolerance>
         <FilterPattern/>
         <ReportType>0</ReportType>
         <HighlightType>1</HighlightType>
         <ShowHide>0</ShowHide>
      </Settings>
      <Files>
         <Filename0>C:\Folder\SubFolder\File 1.xls</Filename0>
         <Filename1>C:\Folder\SubFolder\File 2.xls</Filename1>
      </Files>
      <Pairs>
         <MatchType>1</MatchType>
         <MatchInclude>2</MatchInclude>
      </Pairs>
   </Project>
</Synkronizer>
```

For a project where pairs have individual settings the file will look like this:
(MatchType will be set to 0 as soon as you set a pair option such as RangeAddr or DBKeys.)

The pair tags must be sequentially numbered via the ID attribute.

```
<?xml version="1.0" standalone="yes"?>
<Synkronizer>
   <Project ID="1">
      <Settings>
```

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```
            <CompareType>0</CompareType>
            <Formats>0</Formats>
            <Filters>0</Filters>
            <FilterTolerance>0</FilterTolerance>
            <FilterPattern/>
            <ReportType>0</ReportType>
            <HighlightType>1</HighlightType>
            <ShowHide>0</ShowHide>
         </Settings>
         <Files>
            <Filename0>C:\Folder\SubFolder\File 1.xls</Filename0>
            <Filename1>C:\Folder\SubFolder\File 2.xls</Filename1>
         </Files>
         <Pairs>
            <MatchInclude>3</MatchInclude>
            <MatchType>0</MatchType>
            <PairCount>3</PairCount>
            <Pair ID="1">
               <SheetName0>Addresses</SheetName0>
               <SheetName1>Addresses</SheetName1>
            </Pair>
            <Pair ID="2">
               <SheetName0>Controlling</SheetName0>
               <SheetName1>Controlling</SheetName1>
               <RangeAddr0>$A$4:$AC$75</RangeAddr0>
               <RangeAddr1>$A$4:$AC$75</RangeAddr1>
               <DBRow>5</DBRow>
               <DBKeys>1</DBKeys>
               <DBOptionsMask>14</DBOptionsMask>
            </Pair>
            <Pair ID="3">
               <SheetName0>Budget</SheetName0>
               <SheetName1>Budget</SheetName1>
            </Pair>
         </Pairs>
      </Project>
   </Synkronizer>
```

# 6 Problems / Errors

## 6.1 Problems / Errors

If you should have problems with the software (error messages, unable to activate, etc.), please proceed as follows:

1. Open a new e-mail without entering any content

2. Start the Synkronizer application

3. Select Project » Help » About

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4. Double-click with the mouse on the red Synkronizer symbol.
   A **diagnostics file** will then be created on the desktop of your pc. Attach this file to the e-mail.

5. Open the following directory

   C:\Program Files\Synkronizer\Synkronizer 10.0

   and attach the file **License.xml** to the e-mail.

6. Send the files to support@synkronizer.com together with any further comments or observations you may have. Please include information about your set-up (e.g., network, Citrix server, terminal server, subnets, etc.) to help in the evaluation and resolution of the problem.

   During business days, you will get an answer from our support team within 24 hours.

## 6.2 Known Problems / Errors

**Synkronizer 10.0 is installed but does not appear on the toolbar (under tools) or on the ribbon(under review)**
The most likely cause is that Synkronizer ended up under "Disabled addins". This may happen is you stop (or crash) excel while Synkronizer is busy.
Proceed as follows to re-enable Synkronizer:

Excel 2007 / 2010
1. Click the Microsoft Office Button image, click Excel Options, and then click Add-Ins.
2. Check if Synkronizer 10.0 is listed under "Disabled Application Add-ins" (it should be listed under "Active Application Add-ins").
3. Select & remove Synkronizer from the disabled category. It will then appear in either "Active Application Add-ins" or "Inactive Application Add-ins".
   If it is listed under "inactive" then go to the ComAddin dropdown and activate it.

Excel 2003

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1. Select Help » About Microsoft Office Excel » Disabled Items
2. Select the Synkronizer add-in and click Enable
3. Re-start Excel 2003

Excel XP (and also Excel 2003)
1. Close Excel
2. Start RegEdit.exe
3. Select the following folder:
   Excel XP: HKEY_CURRENT_USER\Software\Microsoft\Office\10.0\Excel\Resiliency
   Excel 2003: HKEY_CURRENT_USER\Software\Microsoft\Office\11.0\Excel\Resiliency
4. If there is a key there called "DisabledItems" then remove the entire key or the items it contains.

**You could create a Registry file (.reg) to do this...**
1. Start notepad (or any text editor)
2. Cut and Paste the block of code below
3. Save the file on your desktop with a .REG file extension
4. Double-click the saved file (you must have administor rights due to the changes under HKLM)

```
Windows Registry Editor Version 5.00

;REMOVE ALL DISABLED ITEMS
[-HKEY_CURRENT_USER\Software\Microsoft\Office\10.0\Excel\Resiliency\DisabledItems]
[-HKEY_CURRENT_USER\Software\Microsoft\Office\11.0\Excel\Resiliency\DisabledItems]
[-HKEY_CURRENT_USER\Software\Microsoft\Office\12.0\Excel\Resiliency\DisabledItems]
[-HKEY_CURRENT_USER\Software\Microsoft\Office\14.0\Excel\Resiliency\DisabledItems]
;REMOVE THE ADDIN LOAD COMMAND FROM HKCU
[-HKEY_CURRENT_USER\Software\Microsoft\Office\Excel\Addins\Synkronizer.Connect]

;ADD THE ADDIN LOAD COMMANDS TO HKLM
;for 32bit windows
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office\Excel\Addins\Synkronizer.Connect]
"FriendlyName"="Synkronizer 10.0"
"Description"="Tool for finding and managing differences."
"LoadBehavior"=dword:00000003
"CommandLineSafe"=dword:00000000
;for 64bit windows
[HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Office\Excel\Addins\Synkronizer
"FriendlyName"="Synkronizer 10.0"
"Description"="Tool for finding and managing differences."
"LoadBehavior"=dword:00000003
"CommandLineSafe"=dword:00000000
```

**Language data is not found**
If you work with Windows 7 or Windows Vista, it may occur, that not all language data will be displayed. The reason is that Windows saves automatically the data in the following hidden folder:
`C:\Users\User-XY\AppData\Local\VirtualStore\Program Files (x86)\Synkronizer`
You must remove this directory and then re-install Synkronizer, after that the latest language data is

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visible.

**WMI (Windows Management Instrumentation) service is not installed or not working**
If you get this error you'll need to verify that WMI service is installed and runs properly. Please run/ install the following utilities:
WMI Diagnosis Utility:
http://www.microsoft.com/downloads/details.aspx?familyid=d7ba3cd6-18d1-4d05-b11e-4c64192ae97d&displaylang=en

WMI Repair Instructions:
http://windowsxp.mvps.org/repairwmi.htm

**Known Error Messages**

- Microsoft Visual Basic Invalid Picture
- Object library invalid or contains references to object definitions that could not be found
- Cannot run macro 'RibbonOnLoad'. The macro may not be available in this workbook or all macros may be disabled

These errors usually occur when not all Microsoft Office updates are correctly installed and/or Microsoft Office is corrupted. Please download and install all Microsoft Office updates

http://office.microsoft.com/officeupdate/

and test if the problems are solved. If not you will have to re-install Microsoft Office

**How to disable hyperlink warning messages**

These articles describes how to disable warning messages about potentially dangerous hyperlinks in Office 2007/2003 programs

Office 2007: http://support.microsoft.com/kb/925757
Office 2003: http://support.microsoft.com/kb/829072

**Problems with Excel 4.0 Macros**

You receive an error message when you open a workbook that contains XLM macros

Excel 2003: http://support.microsoft.com/kb/820739/en

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# 7 Visual Basic for Applications (VBA)

## 7.1 Introduction

Synkronizer 10 has a new feature to load and save project files which for many 9.5 users means they will no longer need to write their own code.

For those that do need to process recurring, standardized and or complex comparisons synkronizer's functionality can be accessed
with Visual Basic for Applications (VBA).

**YOU MUST HAVE A LICENSED DEVELOPER EDITION TO ACCESS SYNKRONIZER FUNCTIONS**

To access the automation functionality of Synkronizer you must obtain a reference to the Application Object of the ComAddin. Then you will need the Application.ActiveProject to start working.
We've provided 2 simple "wrapper" functions to simplify you work which we'll also use in following examples.

1. Ensure Synkronizer 10 Developer Edition is installed.
2. Start Excel
3. Open a (new) workbook
4. Open the VB Editor (Keyboard Shortcut Alt-F11)
5. Select your workbook in the Project Explorer window
6. Select menu Tools/References, scroll to 'Synkronizer 10.0 Object Library', check it, and press ok.
7. Select menu Insert/Module
8. Copy the following code:

```
Function SynkApplication() As Synkronizer.Application
  'Wrapper to retrieve the Application object
  With Excel.Application.COMAddIns("Synkronizer.Connect")
    'Ensure the addin is connected.
    If Not .Connect Then .Connect = True

    Set SynkApplication = .Object.Application
  End With
  'Display progress in Excel's status bar.
  SynkApplication.DisplayStatus = True
End Function

Function SynkProject() As Synkronizer.Project
  'Wrapper to retrieve the ActiveProject
  If Not SynkApplication Is Nothing Then
    Set SynkProject = SynkApplication.ActiveProject
  End If
End Function
```

Note:

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- The programmatic identifier used for the ComAddin is "synkronizer.connect"
- The Synkronizer.Application is a child of the ComAddins(progid).Object
- When you attempt to access the application object with a Free or Professional edition, "Nothing" is returned and a messagebox is displayed.

Examples.

## 7.2 Examples

```
Option Explicit

'-------------------------------------------------------
'Requires a Reference to 'Synkronizer 10.0 Object Library'
'-------------------------------------------------------


Const FILE0 As String = "D:\Documents\TestFile1.xlsx"
Const FILE1 As String = "D:\Documents\TestFile2.xlsx"

Function SynkApplication() As Synkronizer.Application
  'Wrapper to retrieve the Application object
  With Excel.Application.COMAddIns("Synkronizer.Connect")
    'Ensure the addin is connected.
    If Not .Connect Then .Connect = True
    'Return the application
    Set SynkApplication = .Object.Application
  End With

  'Display progress in Excel's status bar.
  SynkApplication.DisplayStatus = True
End Function

Function SynkProject() As Synkronizer.Project
  'Wrapper to retrieve the ActiveProject
  If Not SynkApplication Is Nothing Then
    Set SynkProject = SynkApplication.ActiveProject
  End If
End Function


'-------------------------------------------------------------
'Example 1
'Compare sheets "Addresses", highlight differences.

Public Sub Example1()
  Dim oProj As Synkronizer.Project

  Set oProj = SynkProject
  If oProj Is Nothing Then Exit Sub

  With oProj
```

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```
    .Files.Load FILE0, FILE1
    With .Pairs
      .Add "Addresses", "Addresses"
    End With
    With .Settings
      .CompareType = syCompareFormulas
      .Formats = 0
      .Filters = 0
      .HighlightType = syHighlight
      .ReportType = syReportNone
      .ShowHide = syShowHideENABLED + syHideRowsIden
     End With
    .ArrangeWindows
    .Execute

    MsgBox .Results.SummaryMessage, vbOKOnly + vbInformation, "Synkronizer"
    .Unload CloseFiles:=True, DisplayUndo:=False
  End With
End Sub


'-------------------------------------------------------------
'Example 2
'Compare all sheets, highlight differences.

Public Sub Example2()
  Dim oProj As Synkronizer.Project

  Set oProj = SynkProject
  If oProj Is Nothing Then Exit Sub

  With oProj
    .Files.Load FILE0, FILE1
    With .Pairs
      'Ignore empty, hidden or protected sheets
      .MatchInclude = 0
      .MatchType = syMatchAllByName
      .AddMatched
    End With
    With .Settings
      .CompareType = syCompareFormulas
      .Formats = 0
      'Non-strict: Ignore Case, Whitespace and Type differences
      .Filters = syFiltersENABLED + syFiltersCase + syFiltersTrim + syFiltersType
      .HighlightType = syHighlightWithReset
      .ReportType = syReportNone
      .ShowHide = 0
    End With
    .ArrangeWindows
    .Execute

    MsgBox .Results.SummaryMessage, vbOKOnly + vbInformation, "Synkronizer"
    .Unload CloseFiles:=False, DisplayUndo:=False
```

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```
  End With
End Sub


'-------------------------------------------------------------
'Example 3
'Compare first sheets, create a report

Public Sub Example3()
  Dim oProj As Synkronizer.Project

  Set oProj = SynkProject
  If oProj Is Nothing Then Exit Sub

  With oProj
    .Files.Load FILE0, FILE1
    With .Pairs
      .MatchInclude = 0
      .MatchType = syMatchFirstByName
      .AddMatched
    End With
    With .Settings
      .CompareType = syCompareFormulas
      .Formats = 0
      .Filters = 0
      .HighlightType = syHighlightNone
      .ReportType = syReportStandard
      .ShowHide = 0
    End With
    .Execute
    .ReportWorkbook.Windows(1).WindowState = xlNormal

    MsgBox .Results.SummaryMessage, vbOKOnly + vbInformation, "Synkronizer"
    .Unload CloseFiles:=True
  End With
End Sub


'-------------------------------------------------------------
'Example 4
'Database comparison, highlight differences

Public Sub Example4()
  Dim oProj As Synkronizer.Project

  Set oProj = SynkProject
  If oProj Is Nothing Then Exit Sub

  With oProj
    .Files.Load FILE0, FILE1
    With .Pairs
      .Add "Addresses", "Addresses"
    End With
```

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```
    'define database options
    With .Pairs(1)
      .DBRow = 1
      'define primary key columns (of 1st file)
      .DBKeys = "2;3"
      .DBOptions(syDatabaseGroup) = True
    End With

    With .Settings
      .CompareType = syCompareFormulas
      .Formats = 0
      .Filters = syFiltersENABLED + syFiltersCase + syFiltersTrim + syFiltersType
      .HighlightType = syHighlight
      .ReportType = syReportNone
      .ShowHide = 0
     End With
    .ArrangeWindows
    .Execute

    MsgBox .Results.SummaryMessage, vbOKOnly + vbInformation, "Synkronizer"
    .Unload CloseFiles:=True, DisplayUndo:=False
  End With
End Sub


'-------------------------------------------------------------
'Example 5
'Compare one "master" file against a series of "updates"

Sub Example5()
  Dim oProj As Synkronizer.Project
  Dim sFolderNew As String
  Dim sFolderRep As String
  Dim sFileMaster As String
  Dim aFiles() As String
  Dim i As Integer
  Dim sFile As String
  Dim sFileNew As String
  Dim sFileRep As String
  Dim n(1) As Long

  'define master file and folders
  'must end with backslash!
  sFileMaster = "D:\Documents\Old\Master.xlsx"
  sFolderNew = "D:\Documents\New\"
  sFolderRep = "D:\Documents\Reports\"

  Debug.Assert Len(Dir(sFolderNew, vbDirectory))
  Debug.Assert Len(Dir(sFolderRep, vbDirectory))

  'read "new" files
  i = 1
```

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```
sFile = Dir(sFolderNew & "*.xls*")
Do While Len(sFile) > 0
  ReDim Preserve aFiles(1 To i)
  aFiles(i) = sFile
  i = i + 1
  sFile = Dir
Loop

'loop all files
For i = 1 To UBound(aFiles)
  sFileNew = sFolderNew & aFiles(i)
  sFileRep = sFolderRep & "Difference Report " & aFiles(i)
  sFileRep = Left(sFileRep, InStrRev(sFileRep, ".") - 1) & ".xlsx"

  Set oProj = SynkProject
  With oProj
    With .Settings
      .CompareType = syCompareFormulas
      .Formats = 0
      .Filters = 0
      .HighlightType = syHighlightNone
      .ShowHide = 0
      .ReportType = syReportStandard
    End With

    .Files.Load sFileMaster, sFileNew
    With .Pairs
      .MatchInclude = 0
      .MatchType = syMatchFirstByName
      .AddMatched
    End With

    .Execute

    If .Results.Sum Then
      n(1) = n(1) + 1
      If Len(Dir(sFileRep)) > 0 Then Kill sFileRep
      .ReportWorkbook.Close True, sFileRep
    Else
      n(0) = n(0) + 1
      .ReportWorkbook.Close False
    End If

    .Unload CloseFiles:=True
  End With
  Set oProj = Nothing
Next i

MsgBox "finished" & vbLf & _
  n(0) & " workbooks without differences" & vbLf & _
  n(1) & " workbooks with differences, see reports", _
  vbOKOnly + vbInformation, "Synkronizer"
```

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```
End Sub


'-------------------------------------------------------------
'Example 6
'compare all files with the same names of two folders
'a difference report will be created for each set of files. The differences are highl

Sub Example6()
  Dim oProj As Synkronizer.Project
  Dim sFile As String
  Dim aFiles() As String
  Dim i As Integer
  Dim sFolderOld As String
  Dim sFolderNew As String
  Dim sFolderRep As String
  Dim sFileOld As String
  Dim sFileNew As String
  Dim sFileRep As String
  Dim sWorkbooks(0 To 1) As String
  Dim n(0 To 1) As Long

  'define folders
  'must end with backslash!
  sFolderOld = "D:\Documents\Old\"
  sFolderNew = "D:\Documents\New\"
  sFolderRep = "D:\Documents\Reports\"

  Debug.Assert Len(Dir(sFolderOld, vbDirectory))
  Debug.Assert Len(Dir(sFolderNew, vbDirectory))
  Debug.Assert Len(Dir(sFolderRep, vbDirectory))

  'read "old" files
  i = 1
  sFile = Dir(sFolderOld & "*.xls*")
  Do While Len(sFile) > 0
    ReDim Preserve aFiles(1 To i)
    aFiles(i) = sFile
    i = i + 1
    sFile = Dir
  Loop

  'loop all "old" files
  For i = 1 To UBound(aFiles)
    sFileOld = sFolderOld & aFiles(i)
    sFileNew = sFolderNew & aFiles(i)
    sFileRep = sFolderRep & "Difference Report " & aFiles(i)
    sFileRep = Left(sFileRep, InStrRev(sFileRep, ".") - 1) & ".xlsx"

    'check if "new" is there
    If Len(Dir(sFileNew)) > 0 Then
```

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```
    Set oProj = SynkProject
    With oProj

      With .Settings
        .CompareType = syCompareFormulas
        .Formats = 0
        .Filters = 0
        .HighlightType = syHighlight
        .ShowHide = 0
        .ReportType = syReportStandard
      End With

      .Files.Load sFileOld, sFileNew
      With .Pairs
        .MatchInclude = 0
        .MatchType = syMatchFirstByName
        .AddMatched
      End With

      .Execute

      If .Results.Sum Then
        n(1) = n(1) + 1
        If Len(Dir(sFileRep)) > 0 Then Kill sFileRep
        .ReportWorkbook.Close True, sFileRep
      Else
        n(0) = n(0) + 1
        .ReportWorkbook.Close False
      End If

      'store workbook names
      sWorkbooks(0) = .Files.Workbook(0).Name
      sWorkbooks(1) = .Files.Workbook(1).Name

      'close project
      .Unload CloseFiles:=False
    End With
    Set oProj = Nothing

    'save and close workbooks
    With Application
      .DisplayAlerts = False
      .Workbooks(sWorkbooks(0)).Close SaveChanges:=True
      .Workbooks(sWorkbooks(1)).SaveAs sFileNew
      .Workbooks(sWorkbooks(0)).Close SaveChanges:=False
      .DisplayAlerts = True
    End With

  End If
Next i

MsgBox "finished" & vbLf & _
  n(0) & " workbooks without differences" & vbLf & _
```

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```
    n(1) & " workbooks with differences, see reports", _
    vbOKOnly + vbInformation, "Synkronizer"

End Sub


'-------------------------------------------------------------
'Example 7
'compare all files with the same names of two folders
'a log file with the total differences of each file pair will be created

Sub Example7()
  Dim oProj As Synkronizer.Project
  Dim sFile As String
  Dim aFiles() As String
  Dim i As Integer
  Dim sFolderOld As String
  Dim sFolderNew As String
  Dim sFolderLog As String
  Dim sFileOld As String
  Dim sFileNew As String
  Dim sFileLog As String
  Dim n(1) As Long
  Dim t0 As Date

  'define folders
  'must end with backslash!
  sFolderOld = "D:\Documents\Old\"
  sFolderNew = "D:\Documents\New\"
  sFolderLog = "D:\Documents\Log\"

  Debug.Assert Len(Dir(sFolderOld, vbDirectory))
  Debug.Assert Len(Dir(sFolderNew, vbDirectory))
  Debug.Assert Len(Dir(sFolderLog, vbDirectory))

  t0 = Timer

  'create log file
  sFileLog = sFolderLog & "\synkronizer_log.txt"
  Open sFileLog For Output As #1
  Print #1, "Synkronizer Logfile"
  Print #1, "-------------------"
  Print #1, ""
  Print #1, "Date: " & Format(Date, "YYYY-MM-DD")
  Print #1, "Time: " & Format(Time, "hh:nn:ss")
  Print #1, ""
  Print #1, "Filepair" & vbTab & "Differences"


  'read "old" files
  i = 1
  sFile = Dir(sFolderOld & "*.xls*")
  Do While Len(sFile) > 0
```

```
  ReDim Preserve aFiles(1 To i)
  aFiles(i) = sFile
  i = i + 1
  sFile = Dir
Loop

'loop all "old" files
For i = 1 To UBound(aFiles)
  sFileOld = sFolderOld & aFiles(i)
  sFileNew = sFolderNew & aFiles(i)

  'check if "new" is there
  If Len(Dir(sFileNew)) > 0 Then

    Set oProj = SynkProject
    With oProj

      With .Settings
        .CompareType = syCompareFormulas
        .Formats = 0
        .Filters = 0
        .HighlightType = syHighlightNone
        .ShowHide = 0
        .ReportType = syReportNone
      End With

      .Files.Load FILE0, FILE1
      With .Pairs
        .MatchInclude = 0
        .MatchType = syMatchFirstByName
        .AddMatched
      End With
      .Execute

      Print #1, aFiles(i) & vbTab & .Results.Sum

      .Unload CloseFiles:=True
    End With

    Set oProj = Nothing
  Else
    Print #1, aFiles(i) & vbTab & "error"
  End If

Next i

Print #1, ""
Print #1, "Comparison time: " & Format(Timer - t0, " 00.00\s\")
Close

MsgBox "finished" & vbLf & _
  UBound(aFiles) & " files compared, see log file", _
  vbOKOnly + vbInformation, "Synkronizer"
```

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```
End Sub


'-------------------------------------------------------------
'Example 8
'compare all files with the same names of two folders
'does the following:
'1) highlight differences
'2) creates a difference report of each filepair
'3) creates a log file with the total differences of each file pair

Sub Example8()
  Dim oProj As Synkronizer.Project
  Dim sFile As String
  Dim aFiles() As String
  Dim i As Integer
  Dim sFolderOld As String
  Dim sFolderNew As String
  Dim sFolderRep As String
  Dim sFolderLog As String
  Dim sFileOld As String
  Dim sFileNew As String
  Dim sFileRep As String
  Dim sFileLog As String
  Dim sWorkbooks(0 To 1) As String
  Dim n(0 To 1) As Long
  Dim t0 As Date

  'define folders
  'must end with backslash!
  sFolderOld = "D:\Documents\Old\"
  sFolderNew = "D:\Documents\New\"
  sFolderRep = "D:\Documents\Reports\"
  sFolderLog = "D:\Documents\Log\"

  Debug.Assert Len(Dir(sFolderOld, vbDirectory))
  Debug.Assert Len(Dir(sFolderNew, vbDirectory))
  Debug.Assert Len(Dir(sFolderRep, vbDirectory))
  Debug.Assert Len(Dir(sFolderLog, vbDirectory))

  t0 = Timer

  'create log file
  sFileLog = sFolderLog & "\synkronizer_log.txt"
  Open sFileLog For Output As #1
  Print #1, "Synkronizer Logfile"
  Print #1, "-------------------"
  Print #1, ""
  Print #1, "Date: " & Format(Date, "YYYY-MM-DD")
  Print #1, "Time: " & Format(Time, "hh:nn:ss")
  Print #1, ""
```

```
Print #1, "Filepair" & vbTab & "Differences"


'read "old" files
i = 1
sFile = Dir(sFolderOld & "*.xls*")
Do While Len(sFile) > 0
  ReDim Preserve aFiles(1 To i)
  aFiles(i) = sFile
  i = i + 1
  sFile = Dir
Loop

'loop all "old" files
For i = 1 To UBound(aFiles)
  sFileOld = sFolderOld & aFiles(i)
  sFileNew = sFolderNew & aFiles(i)
  sFileRep = sFolderRep & "Difference Report " & aFiles(i)
  sFileRep = Left(sFileRep, InStrRev(sFileRep, ".") - 1) & ".xlsx"

  'check if "new" is there
  If Len(Dir(sFileNew)) > 0 Then

    Set oProj = SynkProject
    With oProj

      With .Settings
        .CompareType = syCompareFormulas
        .Formats = 0
        .Filters = 0
        .HighlightType = syHighlight
        .ShowHide = 0
        .ReportType = syReportStandard
      End With

      .Files.Load sFileOld, sFileNew
      With .Pairs
        .MatchInclude = 0
        .MatchType = syMatchFirstByName
        .AddMatched
      End With

      .Execute

      If .Results.Sum Then
        n(1) = n(1) + 1
        If Len(Dir(sFileRep)) > 0 Then Kill sFileRep
        .ReportWorkbook.Close True, sFileRep
      Else
        n(0) = n(0) + 1
        .ReportWorkbook.Close False
      End If
```

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```
            Print #1, aFiles(i) & vbTab & .Results.Sum

            'store workbook names
            sWorkbooks(0) = .Files.Workbook(0).Name
            sWorkbooks(1) = .Files.Workbook(1).Name

            'close project
            .Unload CloseFiles:=False
          End With
          Set oProj = Nothing

          'save and close workbooks
          With Application
            .DisplayAlerts = False
            .Workbooks(sWorkbooks(0)).Close SaveChanges:=True
            .Workbooks(sWorkbooks(1)).SaveAs sFileNew
            .Workbooks(sWorkbooks(0)).Close SaveChanges:=False
            .DisplayAlerts = True
          End With

        Else
          Print #1, aFiles(i) & vbTab & "error"
        End If
      Next i

      Print #1, ""
      Print #1, "Comparison time: " & Format(Timer - t0, " 00.00\s\")
      Close

      MsgBox "finished" & vbLf & _
        n(0) & " workbooks without differences" & vbLf & _
        n(1) & " workbooks with differences, see reports", _
        vbOKOnly + vbInformation, "Synkronizer"

    End Sub
```

# 8 Object Model Reference

## 8.1 Application Object

### 8.1.1 Application Object

Top level object. Entry point for all automation.

#### Remarks

**The application object is only accessible when you have a licensed Developer Edition**

#### Example

To gain access to the Application and the ActiveProject in VBA you should do following:.

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```
Dim synAdd As Office.ComAddin
Dim synApp As Synkronizer.Application
Dim synProject As Synkronizer.Project

'set the comaddin object
Set synAdd = Application.ComAddins("synkronizer.connect")
'ensure the comaddin is connected
If not synAdd.Connect then synAdd.Connect = True
'set the application
Set synApp = synAdd.Object
'set the project
Set synProject = synApp.ActiveProject
```

**See Also**

- **Application Object**
- **Application Object Members**

## 8.1.2 Application Object Members

**Methods**

| Name | Description |
|---|---|

**Properties**

| Name | Description |
|---|---|
| **ActiveProject** | Project that is currently active. |
| **DisplayStatus** | Determines if Progress is displayed on status bar during execution. |
| **Customer** | Returns the name of the licensed customer. |
| **EditionName** | Returns the name of the licensed synkronizer edition. |
| **VersionName** | Returns the version and build number of the application. |

**Events**

| Name | Description |
|---|---|

## 8.1.3 Properties

### 8.1.3.1 ActiveProject Property

Project that is currently active. **Read Only** .

**Syntax**

*expression.***ActiveProject**
expression. A variable representing a **Application** object.

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See Also

- Application Object
- Application Object Members

### 8.1.3.2 DisplayStatus Property

Returns or sets a boolean that determines if progress is displayed in Excel's status bar during execution.

Syntax

*expression*.**DisplayStatus**
expression. A variable representing a Application object.

See Also

- Application Object
- Application Object Members

### 8.1.3.3 Customer Property

Returns the name of the licensed customer. **Read Only** .

Syntax

*expression*.**Customer**
expression. A variable representing a Application object.

See Also

- Application Object
- Application Object Members

### 8.1.3.4 EditionName Property

Returns the name of the licensed synkronizer edition. **Read Only** .

Syntax

*expression*.**EditionName**
expression. A variable representing a Application object.

See Also

- Application Object
- Application Object Members

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#### 8.1.3.5 VersionName Property

Returns the version and build number of the application. **Read Only** .

**Syntax**

*expression*.**VersionName**
expression. A variable representing a **Application** object.

---

**See Also**

- **Application Object**
- **Application Object Members**

## 8.2 Project Object

### 8.2.1 Project Object

The project is the central object for working with Synkronizer.

---

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.2 Project Object Members

**Methods**

| Name | Description |
|---|---|
| **Load** | Loads the specified projectfile into memory. |
| **Save** | Saves the project's configuration to the specified path. |
| **Unload** | Unloads the current project. Optionally closes the files |
| **Execute** | Executes the compare process. |
| **DoReport** | Creates a Report specified in **ReportType** settings. |
| **DoHighlight** | Performs Highlighting specified in **HighlightType** settings. |
| **DoShowHide** | Performs ShowHide specified in **ShowHide** settings. |
| **UndoHighlight** | Undoes changes made by **DoHighlight** |
| **UndoShowHide** | Undoes changes made by **DoShowHide** |
| **Reset** | Resets specified objects or results. |
| **ProtectionRemove** | Removes protection for pairs that have protected worksheets using the **PasswordList** |
| **ProtectionValidate** | Verifies that protected worksheets in pairs can be unprotected with current **PasswordList** |
| **ArrangeWindows** | Arranges (tiles) windows for the active **Files** |
| **SelectPairSheets** | Activates the worksheets of the **ActivePair** |

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### Properties

| Name | Description |
|---|---|
| FullName | The full path and name of the project file. |
| Name | The name of the project file. |
| ReportWorkbook | Report workbook (when created). |
| Settings | Container for all Settings of the project. |
| Files | Container for the Files (workbooks) of the project. |
| Pairs | Container for the Pairs (worksheets) of the project. |
| Results | Container for the (combined) Results of all Pairs. |
| ActivePair | Pair that is currently active. |

### Events

| Name | Description |
|---|---|
| Progress | Raised during compare execution to indicate running subprocess. |
| PairActivate | Raised when is Pair is activated. |
| PairDeactivate | Raised before a Pair is deactivated. |

## 8.2.3 Methods

### 8.2.3.1 Load Method

Loads the specified projectfile into memory.

### Syntax

*expression*.**Load*(ProjectFilePath)***
expression. A variable representing a Project object.

### Parameters

| Name | Type | Description |
|---|---|---|
| ProjectFilePath | String | Path and file name of the project file. (File extension is '.xml'). |

### Return Value

none

### Remarks

If another project is active it will be unloaded first.

### See Also

- Project Object
- Project Object Members

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### 8.2.3.2 Save Method

Saves the project's configuration to the specified path.

#### Syntax

*expression*.**Save*(ProjectFilePath)***
expression. A variable representing a **Project** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ProjectFilePath | String | Path and file name of the project file. (File extension is '.xml'). |

#### Return Value

none

#### See Also

- **Project Object**
- **Project Object Members**

### 8.2.3.3 Unload Method

Unloads the project results. Optionally closes the workbooks(without saving!)

#### Syntax

*expression*.**Unload*(CloseFiles,DisplayUndo)***
expression. A variable representing a **Project** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| CloseFiles | Boolean | Closes the compared files (workbooks). |
| DisplayUndo | Boolean | Optional. When True and Highlighting or ShowHide is active then the user will be given the option to undo |

#### Return Value

none

#### Remarks

If you want the files to be saved (with possible highlighting and showhide) then you must do so before the Unload method is called.

#### See Also

- **Project Object**

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- Project Object Members

### 8.2.3.4 Reset Method

Resets specified objects or results.

#### Syntax

*expression*.**Reset*(eReset)***
expression. A variable representing a Project object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| eReset | syResetType | Constant specifying which objects and variables should be reset. |

#### Return Value

none

#### See Also

- Project Object
- Project Object Members

### 8.2.3.5 Execute Method

Executes the compare process.

#### Syntax

*expression*.**Execute*(ActivePairOnly)***
expression. A variable representing a Project object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | When True only the ActivePair is processed. |

#### Return Value

none

#### Remarks

Includes the actions (DoReport, DoHighlight and DoShowHide) specified in related Settings.
.

#### See Also

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- Project Object
- Project Object Members

### 8.2.3.6 DoReport Method

Creates a Report specified in ReportType settings.

#### Syntax

*expression.***DoReport***(ActivePairOnly)*
expression. A variable representing a Project object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the ActivePair is processed. |

#### Return Value

none

#### See Also

- Project Object
- Project Object Members

### 8.2.3.7 DoHighlight Method

Performs Highlighting specified in HighlightType settings.

#### Syntax

*expression.***DoHighlight***(ActivePairOnly)*
expression. A variable representing a Project object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the ActivePair is processed. |

#### Return Value

none

#### See Also

- Project Object
- Project Object Members

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### 8.2.3.8 DoShowHide Method

Performs ShowHide specified in **ShowHide** settings.

#### Syntax

*expression*.**DoShowHide*(ActivePairOnly)***
expression. A variable representing a **Project** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the **ActivePair** is processed. |

#### Return Value

none

#### See Also

- **Project Object**
- **Project Object Members**

### 8.2.3.9 UndoHighlight Method

Undoes changes made by **DoHighlight**

#### Syntax

*expression*.**UndoHighlight*(ActivePairOnly)***
expression. A variable representing a **Project** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the **ActivePair** is processed. |

#### Return Value

none

#### See Also

- **Project Object**
- **Project Object Members**

### 8.2.3.10 UndoShowHide Method

Undoes changes made by **DoShowHide**

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### Syntax

*expression*.**UndoShowHide*(ActivePairOnly)***
expression. A variable representing a **Project** object.

### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the **ActivePair** is processed. |

### Return Value

none

### See Also

- **Project Object**
- **Project Object Members**

## 8.2.3.11 ProtectionRemove Method

Removes protection for pairs that have protected worksheets using the **PasswordList**

### Syntax

*expression*.**ProtectionRemove*(ActivePairOnly)***
expression. A variable representing a **Project** object.

### Parameters

| Name | Type | Description |
|---|---|---|
| ActivePairOnly | Boolean | Optional. When True only the **ActivePair** is processed. |

### Return Value

none

### See Also

- **Project Object**
- **Project Object Members**

## 8.2.3.12 ProtectionValidate Method

Verifies that protected worksheets in pairs can be unprotected with current **PasswordList**

### Syntax

*expression*.**ProtectionValidate**
expression. A variable representing a **Project** object.

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### Return Value

Returns a **Boolean** value

---

### See Also

- **Project Object**
- **Project Object Members**

#### 8.2.3.13 ArrangeWindows Method

Arranges (tiles) windows for the active **Files**

### Syntax

*expression*.**ArrangeWindows**
expression. A variable representing a **Project** object.

### Return Value

none

### Remarks

Minimizes windows of all other workbooks.

---

### See Also

- **Project Object**
- **Project Object Members**

## 8.2.4 Properties

#### 8.2.4.1 Settings Property

Container for all Settings of the project. **Read Only** **Settings** object.

### Syntax

*expression*.**Settings**
expression. A variable representing a **Project** object.

---

### See Also

- **Project Object**
- **Project Object Members**

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#### 8.2.4.2 Files Property

Container for the Files (workbooks) of the project. **Read Only** Files object.

**Syntax**

*expression*.**Files**
expression. A variable representing a **Project** object.

---

**See Also**

- **Project Object**
- **Project Object Members**

#### 8.2.4.3 Pairs Property

Container for the Pairs (worksheets) of the project. **Read Only** Pairs object.

**Syntax**

*expression*.**Pairs**
expression. A variable representing a **Project** object.

---

**See Also**

- **Project Object**
- **Project Object Members**

#### 8.2.4.4 Results Property

Container for the (combined) Results of all Pairs. **Read Only** Results object.

**Syntax**

*expression*.**Results**
expression. A variable representing a **Project** object.

---

**See Also**

- **Project Object**
- **Project Object Members**

#### 8.2.4.5 ActivePair Property

Pair that is currently active. Pair object.

**Syntax**

*expression*.**ActivePair*(oPair)***

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expression. A variable representing a **Project** object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| oPair | **Pair** | Pair to be activated. |

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.4.6 FullName Property

The full path and name of the project file. **Read Only String** value.

**Syntax**

*expression*.**FullName**
expression. A variable representing a **Project** object.

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.4.7 Name Property

The name of the project file. **Read Only String** value.

**Syntax**

*expression*.**Name**
expression. A variable representing a **Project** object.

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.4.8 ReportWorkbook Property

Report workbook (when created). **Read Only Workbook** object.

**Syntax**

*expression*.**ReportWorkbook**
expression. A variable representing a **Project** object.

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**See Also**

- **Project Object**
- **Project Object Members**

## 8.2.5 Events

### 8.2.5.1 Progress Event

Raised during compare execution to indicate running subprocess.

**Remarks**

You can use this event to show progress indicator to the user.

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.5.2 PairActivate Event

Raised when is Pair is activated.

**Remarks**

You can use this event to select the pair's worksheets.

**See Also**

- **Project Object**
- **Project Object Members**

### 8.2.5.3 PairDeactivate Event

Raised before a Pair is deactivated.

**See Also**

- **Project Object**
- **Project Object Members**

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# 8.3 Settings Object

## 8.3.1 Settings Object

Container for a group of properties that specify how files will be compared and what actions will be performed.

**See Also**

- Settings Object
- Settings Object Members

## 8.3.2 Settings Object Members

**Methods**

| Name | Description |
|---|---|
| DefaultsLoad | Loads user preferences. |
| DefaultsSave | Saves settings as user preference. |
| DefaultsReset | Removes user preference, reloads default values. |

**Properties**

| Name | Description |
|---|---|
| CompareType | Returns or sets a constant specifying which content property to compare. |
| CompareDescription | Returns a descriptive text for the CompareType |
| Formats | Returns or sets a series of options specifying which formatting properties to compare. |
| FormatsOption | Returns or sets the specified formats compare option. |
| FormatsDescription | Returns a descriptive text for the enabled Formats options. |
| Filters | Returns or sets a series of options specifying which differences to filter (ignore). |
| FiltersOption | Returns or sets the specified filter option. |
| FiltersDescription | Returns a descriptive text for the enabled Filters options. |
| FilterPattern | Returns or sets a pattern for either Regex of Like filtering of string differences. |
| FilterTolerance | Returns or sets a number below which numeric differences will be ignored. |
| ReportType | Returns or sets a constant specifying which Report to create. |
| HighlightType | Returns or sets a constant specifying which Highlighting to perform. |
| HighlightDescription | Returns a descriptive text for the HighlightType |
| ShowHide | Returns or sets a series of options specifying which group of Rows and Columns to Show or Hide. |
| ShowHideOption | Returns or sets the specified ShowHide option. |
| ShowHideDescription | Returns a descriptive text for the enabled ShowHide options. |

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### Events

| Name | Description |
|---|---|

## 8.3.3 Methods

### 8.3.3.1 DefaultsLoad

Loads user preferences.

#### Syntax

*expression*.**DefaultsLoad**
expression. A variable representing a **Settings** object.

#### Return Value

none

---

#### See Also

- **Settings Object**
- **Settings Object Members**

### 8.3.3.2 DefaultsSave

Saves settings as user preference.

#### Syntax

*expression*.**DefaultsSave**
expression. A variable representing a **Settings** object.

#### Return Value

none

---

#### See Also

- **Settings Object**
- **Settings Object Members**

### 8.3.3.3 DefaultsReset

Removes user preference, reloads default values.

#### Syntax

*expression*.**DefaultsReset**
expression. A variable representing a **Settings** object.

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### Return Value

none

### See Also

- Settings Object
- Settings Object Members

## 8.3.4 Properties

### 8.3.4.1 CompareType

Returns or sets a constant specifying which content property to compare. syCompareType constant.

### Syntax

*expression*.**CompareType**
expression. A variable representing a Settings object.

### See Also

- Settings Object
- Settings Object Members

### 8.3.4.2 CompareDescription

Returns a descriptive text for the CompareType **Read Only String** value.

### Syntax

*expression*.**CompareDescription**
expression. A variable representing a Settings object.

### See Also

- Settings Object
- Settings Object Members

### 8.3.4.3 Formats

Returns or sets a series of options specifying which formatting properties to compare. syFormatsFlag constant.

### Syntax

*expression*.**Formats**

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expression. A variable representing a **Settings** object.

### Remarks

If the ENABLED flag is not set all other flags are ignored.

### See Also

- **Settings Object**
- **Settings Object Members**

#### 8.3.4.4 FormatsOption

Returns or sets the specified formats compare option. **Boolean** value.

### Syntax

*expression*.**FormatsOption*(Flag)***
expression. A variable representing a **Settings** object.

### Parameters

| Name | Type | Description |
|---|---|---|
| Flag | **syFormatsFlag** | (Series of) Flag(s) specifying a group of formatting properties to compare. |

### Remarks

If the ENABLED flag is not set all other flags are ignored.

### See Also

- **Settings Object**
- **Settings Object Members**

#### 8.3.4.5 FormatsDescription

Returns a descriptive text for the enabled **Formats** options. **Read Only String** value.

### Syntax

*expression*.**FormatsDescription**
expression. A variable representing a **Settings** object.

### See Also

- **Settings Object**
- **Settings Object Members**

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### 8.3.4.6 Filters

Returns or sets a series of options specifying which differences to filter (ignore). **syFiltersFlag** constant.

#### Syntax

*expression*.**Filters**
expression. A variable representing a **Settings** object.

#### Remarks

If the ENABLED flag is not set all other flags are ignored.

#### See Also

- **Settings Object**
- **Settings Object Members**

### 8.3.4.7 FiltersOption

Returns or sets the specified filter option. **Boolean** value.

#### Syntax

*expression*.**FiltersOption*(Flag)***
expression. A variable representing a **Settings** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| Flag | **syFiltersFlag** | (Series of) Flag(s) specifying which differences to ignore. |

#### Remarks

If the ENABLED flag is not set all other flags are ignored.

#### See Also

- **Settings Object**
- **Settings Object Members**

### 8.3.4.8 FiltersDescription

Returns a descriptive text for the enabled **Filters** options. **Read Only String** value.

#### Syntax

*expression*.**FiltersDescription**
expression. A variable representing a **Settings** object.

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### See Also

- Settings Object
- Settings Object Members

#### 8.3.4.9 FilterPattern

Returns or sets a pattern for either Regex of Like filtering of string differences. **String** value.

### Syntax

*expression*.**FilterPattern**
expression. A variable representing a Settings object.

### Remarks

Must begin with either "r:" or "l:".

### See Also

- Settings Object
- Settings Object Members

#### 8.3.4.10 FilterTolerance

Returns or sets a number below which numeric differences will be ignored. **Double** value.

### Syntax

*expression*.**FilterTolerance**
expression. A variable representing a Settings object.

### See Also

- Settings Object
- Settings Object Members

#### 8.3.4.11 ReportType

Returns or sets a constant specifying which Report to create. syReportType constant.

### Syntax

*expression*.**ReportType**
expression. A variable representing a Settings object.

### See Also

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- Settings Object
- Settings Object Members

### 8.3.4.12 HighlightType

Returns or sets a constant specifying which Highlighting to perform. syHighlightType constant.

#### Syntax

*expression*.**HighlightType**
expression. A variable representing a Settings object.

---

#### See Also

- Settings Object
- Settings Object Members

### 8.3.4.13 HighlightDescription

Returns a descriptive text for the HighlightType **Read Only String** value.

#### Syntax

*expression*.**HighlightDescription**
expression. A variable representing a Settings object.

---

#### See Also

- Settings Object
- Settings Object Members

### 8.3.4.14 ShowHide

Returns or sets a series of options specifying which group of Rows and Columns to Show or Hide. syShowHideFlag constant.

#### Syntax

*expression*.**ShowHide**
expression. A variable representing a Settings object.

#### Remarks

If the ENABLED flag is not set all other flags are ignored.

---

#### See Also

- Settings Object

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- Settings Object Members

#### 8.3.4.15 ShowHideOption

Returns or sets the specified ShowHide option. **Boolean** value.

**Syntax**

*expression*.**ShowHideOption***(Flag)*
expression. A variable representing a Settings object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| Flag | syShowHideFlag | (Series of) Flag(s) specifying the group of rows or columns. |

**Remarks**

If the ENABLED flag is not set all other flags are ignored.

**See Also**

- Settings Object
- Settings Object Members

#### 8.3.4.16 ShowHideDescription

Returns a descriptive text for the enabled ShowHide options. **Read Only String** value.

**Syntax**

*expression*.**ShowHideDescription**
expression. A variable representing a Settings object.

**See Also**

- Settings Object
- Settings Object Members

## 8.4 Files Object

### 8.4.1 Files Object

Container for the two Files (workbooks) to compare.

**See Also**

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- Files Object
- Files Object Members

## 8.4.2 Files Object Members

### Methods

| Name | Description |
|---|---|
| Load | Loads the two files from disk. |

### Properties

| Name | Description |
|---|---|
| FileName | Returns the full path and filename of either of the Files. |
| IsValid | Returns True if both Files are loaded and can be compared. |
| Workbook | Returns the workbook object of either of the files. |
| Window | Returns the window object of either of the files. |

### Events

| Name | Description |
|---|---|

## 8.4.3 Methods

### 8.4.3.1 Load Method

Loads the two files from disk.

### Syntax

*expression*.**Load*(FileName0,FileName1)***
expression. A variable representing a Files object.

### Parameters

| Name | Type | Description |
|---|---|---|
| FileName0 | String | Full path for 1st file (also called Master). |
| FileName1 | String | Full path for 2nd file (also called Update). |

### Return Value

none

### See Also

- Files Object
- Files Object Members

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## 8.4.4 Properties

### 8.4.4.1 FileName Property

Returns the full path and filename of either of the Files. **Read Only String** value.

#### Syntax

*expression*.**FileName*(MUid)***
expression. A variable representing a **Files** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Files** |

#### See Also

- **Files Object**
- **Files Object Members**

### 8.4.4.2 IsValid Property

Returns True if both Files are loaded and can be compared. **Read Only Boolean** value.

#### Syntax

*expression*.**IsValid**
expression. A variable representing a **Files** object.

#### See Also

- **Files Object**
- **Files Object Members**

### 8.4.4.3 Workbook Property

Returns the workbook object of either of the files. **Read Only Workbook** object.

#### Syntax

*expression*.**Workbook*(MUid)***
expression. A variable representing a **Files** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Files** |

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**See Also**

- **Files Object**
- **Files Object Members**

#### 8.4.4.4 Window Property

Returns the window object of either of the files. **Read Only Window** object.

**Syntax**

*expression*.**Window*(MUid)***
expression. A variable representing a **Files** object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Files** |

**See Also**

- **Files Object**
- **Files Object Members**

## 8.5 Pairs Object

### 8.5.1 Pairs Object

Collection of Pair objects.

**Remarks**

You can add pairs individually with the **Add** Method or use the **AddMatched** method to automatically add pairs for all worksheets that have matching names or indexes.

You can retrieve a specific pair with Pairs(Index) or Pairs.Item(index)
You can remove a specific pair with Pairs.Remove(Index)
You can remove all pairs by using the ResetPairs Method
.

**See Also**

- **Pairs Object**
- **Pairs Object Members**

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## 8.5.2 Pairs Object Members

### Methods

| Name | Description |
|---|---|
| **Add** | Adds a pair to the Pairs collection. |
| **AddMatched** | Creates Pairs for all "matched" worksheets. |
| **Remove** | Removes specified Pair from the Collection. |
| **ResetPairs** | Resets specified objects and properties from Pairs. |

### Properties

| Name | Description |
|---|---|
| **Item** | Returns a single item (Pair) from the collection. |
| **Exists** | Returns True if specified ID or Index exists in the collection. |
| **Count** | Returns the number of members in the collection. |
| **MatchInclude** | Returns or sets options specifying types of worksheets to include by **AddMatched** method. |
| **MatchIncludeOption** | Returns or sets options specifying types of worksheets to include by **AddMatched** method. |
| **MatchType** | Returns or sets a constant specifying how worksheets will be matched by **AddMatched** method. |
| **PasswordList** | Returns or sets a semicolon delimited list of passwords needed to access protected sheets. |

### Events

| Name | Description |
|---|---|

## 8.5.3 Methods

### 8.5.3.1 Add Method

Adds a pair to the Pairs collection.

### Syntax

*expression*.**Add*(SheetName0,SheetName1)***
expression. A variable representing a **Pairs** object.

### Parameters

| Name | Type | Description |
|---|---|---|
| SheetName0 | String | A name or index of a worksheet. (must exist in Master). |
| SheetName1 | String | A name or index of a worksheet. (must exist in Update). |

### Return Value

Returns a **Pair** object

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### See Also

- Pairs Object
- Pairs Object Members

### 8.5.3.2 AddMatched Method

Creates Pairs for all "matched" worksheets.

#### Syntax

*expression.***AddMatched**
expression. A variable representing a Pairs object.

#### Return Value

none

#### Remarks

Matching depends on MatchType and MatchInclude

### See Also

- Pairs Object
- Pairs Object Members

### 8.5.3.3 Remove Method

Removes specified Pair from the Collection.

#### Syntax

*expression.***Remove*(Index)***
expression. A variable representing a Pairs object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| Index | Variant | A valid ID or Index for the Pair. |

#### Return Value

none

### See Also

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- Pairs Object
- Pairs Object Members

#### 8.5.3.4 ResetPairs Method

Resets specified objects and properties from Pairs.

**Syntax**

*expression*.**ResetPairs*(eReset)***
expression. A variable representing a Pairs object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| eReset | syResetType | |

**Return Value**

none

**See Also**

- Pairs Object
- Pairs Object Members

### 8.5.4 Properties

#### 8.5.4.1 Item Property

Returns a single item (Pair) from the collection. Pair object.

**Syntax**

*expression*.**Item*(Index)***
expression. A variable representing a Pairs object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| Index | Variant | A valid ID or Index for the Pair. |

**See Also**

- Pairs Object
- Pairs Object Members

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### 8.5.4.2 Count Property

Returns the number of members in the collection. **Long** value.

#### Syntax

*expression*.**Count**
expression. A variable representing a **Pairs** object.

#### See Also

- **Pairs Object**
- **Pairs Object Members**

### 8.5.4.3 Exists Property

Returns True if specified ID or Index exists in the collection. **Boolean** value.

#### Syntax

*expression*.**Exists*(Index)***
expression. A variable representing a **Pairs** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| Index | Variant | A valid **ID** or **Index** for the Pair. |

#### See Also

- **Pairs Object**
- **Pairs Object Members**

### 8.5.4.4 PasswordList Property

Returns or sets a semicolon delimited list of passwords needed to access protected sheets. **String** value.

#### Syntax

*expression*.**PasswordList**
expression. A variable representing a **Pairs** object.

#### See Also

- **Pairs Object**
- **Pairs Object Members**

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#### 8.5.4.5 MatchInclude Property

Returns or sets options specifying types of worksheets to include by **AddMatched** method.
**syMatchIncludeFlag** constant.

**Syntax**

*expression*.**MatchInclude**
expression. A variable representing a **Pairs** object.

---

**See Also**

- **Pairs Object**
- **Pairs Object Members**

#### 8.5.4.6 MatchType Property

Returns or sets a constant specifying how worksheets will be matched by **AddMatched** method.
**syMatchType** constant.

**Syntax**

*expression*.**MatchType**
expression. A variable representing a **Pairs** object.

---

**See Also**

- **Pairs Object**
- **Pairs Object Members**

## 8.6 Pair Object

### 8.6.1 Pair Object

Container for a pair of worksheets to compare.

**Remarks**

**Specify a Range**
Normally the entire data range of the sheet is used, but you set the range using the **RangeAddr** property.

**Compare as Database**
You can compare the sheets as databases when
· your data is organized in a tabular layout, with descriptive headers above each column.
· rows can be uniquely identified by a primary key.

You must set the primary key using the **DBKeys** property.
You can specify the starting row of the database with the **DBRow** property.

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When you want the records sorted or the results grouped, use **DBOptions** .
.

**See Also**

- **Pair Object**
- **Pair Object Members**

## 8.6.2 Pair Object Members

**Methods**

| Name | Description |
|---|---|

**Properties**

| Name | Description |
|---|---|
| **DBRow** | Returns or sets the index for the row which contains the headers. |
| **DBKeys** | Returns or sets a semicolon delimited list of Column indices used as primary key for Database. |
| **DBOptions** | Returns or sets options for sorting or grouping database records. |
| **RangeAddr** | Returns or sets an optional Range address for the specified member of the pair. |
| **SheetName** | Returns the name of the worksheet for the specified member of the pair. |
| **Sheet** | Returns the Worksheet object for the specified member of the pair. |
| **Range** | Returns the Range object for the specified member of the pair. |
| **Results** | Returns the number of differences found. |
| **ID** | Returns the key of the Pair object in the Pairs collection. |
| **Index** | Returns the index of the Pair object in the Pairs collection. |
| **IsDB** | Returns True when **DBKeys** property is (correctly) specified. Pair will be compared as database. |
| **Highlighted** | Returns True when differences in the Pair are currently Highlighted and can be Undone. |

**Events**

| Name | Description |
|---|---|
| **Progress** | Raised during compare execution to indicate running subprocess. |

## 8.6.3 Properties

### 8.6.3.1 DBRow Property

Returns or sets the index for the row which contains the headers. **Long** value.

**Syntax**

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*expression*.**DBRow**
expression. A variable representing a **Pair** object.

### Example

This example defines the 3rd row as database heading.

```
With oProj.Pairs(1)
    'row number of database heading
    .DBRow = 3
    'create primary key; column no. of master
    .DBKeys = "2;3"
    'group records
    .DBOptions(syDatabaseGroup) = True
End With
```

### See Also

- **Pair Object**
- **Pair Object Members**

## 8.6.3.2 DBKeys Property

Returns or sets a semicolon delimited list of Column indices used as primary key for Database. **String** value.

### Syntax

*expression*.**DBKeys**
expression. A variable representing a **Pair** object.

### Remarks

The column no. of the primary keys of the Master file have to be entered, separated by semicolons.

### Example

To use the 2nd and 3rd column as primary key.

```
With oProj.Pairs(1)
    'row number of database heading
    .DBRow = 3
    'create primary key; column no. of master
    .DBKeys = "2;3"
    'group records
    .DBOptions(syDatabaseGroup) = True
End With
```

### See Also

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- Pair Object
- Pair Object Members

### 8.6.3.3 DBOptions Property

Returns or sets options for sorting or grouping database records. **Boolean** value.

#### Syntax

*expression.***DBOptions**
expression. A variable representing a Pair object.

#### Example

This example groups the records.

```
With oProj.Pairs(1)
    'row number of database heading
    .DBRow = 3
    'create primary key; column no. of master
    .DBKeys = "2;3"
    'group records
    .DBOptions(syDatabaseGroup) = True
End With
```

#### See Also

- Pair Object
- Pair Object Members

### 8.6.3.4 RangeAddr Property

Returns or sets an optional Range address for the specified member of the pair. **String** value.

#### Syntax

*expression.***RangeAddr*(MUid)***
expression. A variable representing a Pair object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

#### Example

This example sets the range address.

```
With .Pairs
```

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```
    .Add "db1", "db1"
    .Item(1).RangeAddr(muMaster) = "A1:H50"
    .Item(1).RangeAddr(muUpdate) = "A1:H50"
End With
```

**See Also**

- **Pair Object**
- **Pair Object Members**

### 8.6.3.5 SheetName Property

Returns the name of the worksheet for the specified member of the pair. **Read Only String** value.

**Syntax**

*expression*.**SheetName*(MUid)***
expression. A variable representing a **Pair** object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Pair** |

**See Also**

- **Pair Object**
- **Pair Object Members**

### 8.6.3.6 Sheet Property

Returns the Worksheet object for the specified member of the pair. **Read Only Worksheet** object.

**Syntax**

*expression*.**Sheet*(MUid)***
expression. A variable representing a **Pair** object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Pair** |

**See Also**

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- Pair Object
- Pair Object Members

### 8.6.3.7 Range Property

Returns the Range object for the specified member of the pair. **Read Only Range** object.

#### Syntax

*expression*.**Range*(MUid)***
expression. A variable representing a Pair object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

#### Remarks

To change the Range use the RangeAddr property.

#### See Also

- Pair Object
- Pair Object Members

### 8.6.3.8 Results Property

Returns the number of differences found. **Read Only** Results object.

#### Syntax

*expression*.**Results**
expression. A variable representing a Pair object.

#### See Also

- Pair Object
- Pair Object Members

### 8.6.3.9 ID Property

Returns the key of the Pair object in the Pairs collection. **Read Only String** value.

#### Syntax

*expression*.**ID**
expression. A variable representing a Pair object.

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### See Also

- Pair Object
- Pair Object Members

#### 8.6.3.10 Index Property

Returns the index of the Pair object in the Pairs collection. **Read Only Long** value.

### Syntax

*expression*.**Index**
expression. A variable representing a Pair object.

### See Also

- Pair Object
- Pair Object Members

## 8.7 Results Object

### 8.7.1 Results Object

Container for the number of differences found.

### Remarks

The Project returns the combined results. Each Pair returns individual results.

### See Also

- Results Object
- Results Object Members

### 8.7.2 Results Object Members

### Methods

| Name | Description |
|---|---|

### Properties

| Name | Description |
|---|---|
| MissingTabs | Returns the number of Missing Sheets (auto matching only). |
| MissingCols | Returns the number of Missing Columns (or Fields). |
| MissingRows | Returns the number of Missing Rows (or Records). |

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| | |
|---|---|
| DuplicateKeys | Returns the number of Duplicate Keys (database only). |
| DuplicateRecords | Returns the number of Duplicate Records (database only). |
| DifferentContent | Returns the number of Cells with Different Content. |
| DifferentFormats | Returns the number of Cells with Different Formats. |
| Sum | Returns the total number of differences found. |
| SumByCode | Returns the number of specified differences found. |
| SummaryMessage | Returns the results as a formatted text for messagebox. |
| TextDisplay | Returns the number of specified differences found as text. |

### Events

| Name | Description |
|---|---|

## 8.7.3 Properties

### 8.7.3.1 MissingTabs Property

Returns the number of Missing Sheets (auto matching only). **Read Only Long** value.

#### Syntax

*expression.***MissingTabs*(MUid)***
expression. A variable representing a Results object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

#### See Also

- Results Object
- Results Object Members

### 8.7.3.2 MissingCols Property

Returns the number of Missing Columns (or Fields). **Read Only Long** value.

#### Syntax

*expression.***MissingCols*(MUid)***
expression. A variable representing a Results object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

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### See Also

- Results Object
- Results Object Members

### 8.7.3.3 MissingRows Property

Returns the number of Missing Rows (or Records). **Read Only Long** value.

### Syntax

*expression.***MissingRows*(MUid)***
expression. A variable representing a Results object.

### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

### See Also

- Results Object
- Results Object Members

### 8.7.3.4 DuplicateKeys Property

Returns the number of Duplicate Keys (database only). **Read Only Long** value.

### Syntax

*expression.***DuplicateKeys*(MUid)***
expression. A variable representing a Results object.

### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | muMasterUpdateID | Selects either member of the Pair |

### See Also

- Results Object
- Results Object Members

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### 8.7.3.5 DuplicateRecords Property

Returns the number of Duplicate Records (database only). **Read Only Long** value.

#### Syntax

*expression*.**DuplicateRecords*(MUid)***
expression. A variable representing a **Results** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| MUid | **muMasterUpdateID** | Selects either member of the **Pair** |

#### See Also

- **Results Object**
- **Results Object Members**

### 8.7.3.6 DifferentContent Property

Returns the number of Cells with Different Content. **Read Only Long** value.

#### Syntax

*expression*.**DifferentContent**
expression. A variable representing a **Results** object.

#### See Also

- **Results Object**
- **Results Object Members**

### 8.7.3.7 DifferentFormats Property

Returns the number of Cells with Different Formats. **Read Only Long** value.

#### Syntax

*expression*.**DifferentFormats**
expression. A variable representing a **Results** object.

#### See Also

- **Results Object**
- **Results Object Members**

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### 8.7.3.8 Sum Property

Returns the total number of differences found. **Read Only Long** value.

#### Syntax

*expression*.**Sum**
expression. A variable representing a **Results** object.

#### See Also

- **Results Object**
- **Results Object Members**

### 8.7.3.9 SumByCode Property

Returns the number of specified differences found. **Read Only Long** value.

#### Syntax

*expression*.**SumByCode*(ResultCode,MUid)***
expression. A variable representing a **Results** object.

#### Parameters

| Name | Type | Description |
|---|---|---|
| ResultCode | **syResultCode** | Constant selects group of results to return. |
| MUid | **muMasterUpdateID** | Optional. Leave blank to return combined results. |

#### See Also

- **Results Object**
- **Results Object Members**

### 8.7.3.10 SummaryMessage Property

Returns a formatted text that can be used in a messagebox. **Read Only String**.

#### Syntax

*expression*.**SummaryMessage**
expression. A variable representing a **Results** object.

#### See Also

- **Results Object**

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- Results Object Members

#### 8.7.3.11 TextDisplay Property

Returns the number of specified differences found as text. **Read Only String** value.

**Syntax**

*expression*.**TextDisplay*(ResultCode)***
expression. A variable representing a Results object.

**Parameters**

| Name | Type | Description |
|---|---|---|
| ResultCode | **syResultCode** | Constant selects group of results to return. |

**See Also**

- Results Object
- Results Object Members

## 8.8 Enumerations

### 8.8.1 muMasterUpdateID

Constants used to identity the member of a set or pair.

| Name | Description |
|---|---|
| **muMaster** | Selects the 1st member of the set. NOTE: value is **0**). |
| **muUpdate** | Selects the 2nd member of the set. NOTE: value is **1**). |

### 8.8.2 syCompareType

Constants used by the CompareType property in Settings.

| Name | Description |
|---|---|
| **syCompareFormulas** | The Formula property of the cells are compared. |
| **syCompareValues** | The Value2 property of the cells are compared. |

### 8.8.3 syReportType

Constants used by the ReportType property in Settings.

| Name | Description |
|---|---|
| **syReportNon** | No report is created. |

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| | |
|---|---|
| **e** | |
| **syReportStandard** | A workbook is created, range addresses are plain text. |
| **syReportHyperLinks** | A workbook is created, range addresses are hyperlinks to the original document. |
| **syReportXML** | An xml files is created, uses XSL transformation. Needs IE and MSXML. |

### 8.8.4 syHighlightType

Constants used by the **HighlightType** property in Settings.

| Name | Description |
|---|---|
| **syHighlightNone** | Differences are not Highlighted. |
| **syHighlight** | Differences are Highlighted. No Cell coloring for all cells if not removed before processing. |
| **syHighlightWithReset** | Differences are Highlighted. Cell coloring for all cells is removed before processing. |

### 8.8.5 syFormatsFlag

Constants used to by the the **Formats** property in Settings.

| Name | Description |
|---|---|
| **syFormatsENABLED** | Enable or Disable all other Formats options. |
| **syFormatsNumber** | Compare Number (Numberformat) properties of cells. |
| **syFormatsAlignment** | Compare Alignment properties of cells. |
| **syFormatsFont** | Compare Font properties of cells. |
| **syFormatsBorder** | Compare Border properties of cells. |
| **syFormatsPattern** | Compare Pattern (Interior/Fill) properties of cells. |
| **syFormatsProtection** | Compare Protection properties of cells. |

### 8.8.6 syFiltersFlag

Constants used to by the the **Filters** property in Settings.

| Name | Description |
|---|---|
| **syFiltersENAB** | Enable or Disable all other Filters options. |

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| LED | |
|---|---|
| **syFiltersCase** | Text compare Case Insensitive. "ABC" vs "abc" will not result in a differences. |
| **syFiltersTrim** | Text compare Trim text. "ABC " vs "ABC" will not result in a differences. |
| **syFiltersType** | Differences in Datatype are ignored. Use to ignore differences between Date values and String values representing Dates. |
| **syFiltersConstant** | All constants are ignored. Only formulas are compared. |
| **syFiltersFormula** | All formulas are ignored. Only constants are compared. |
| **syFiltersHidCols** | Data in Hidden Columns will be ignored. |
| **syFiltersHidRows** | Data in Hidden Rows will be ignored. |

### 8.8.7 syShowHideFlag

Constants used to by the the **ShowHide** property in Settings.

| Name | Description |
|---|---|
| **syShowHideENABLED** | Enable or Disable all other ShowHide options. |
| **syHideRowsIden** | Hide identical rows (linked, without cell differences). |
| **syHideRowsDiff** | Hide different column: (linked, some cells are different). |
| **syHideRowsMiss** | Hide missing rows: (not occurring in the other worksheet). |
| **syHideRowsDups** | Hide rows with either duplicate keys or records. |
| **syHideColsMiss** | Hide missing columns: (not occurring in the other worksheet). |

### 8.8.8 syMatchType

List of valid types of Matching.

| Name | Description |
|---|---|
| **syMatchManual** | Pairs were modified or added with **Add** |
| **syMatchFirstByName** | The first Matched sheets are added. |
| **syMatchAllByName** | All included sheets are matched by Name. |
| **syMatchAllByIndex** | All included sheets are matched by Index. |

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### 8.8.9 syMatchIncludeFlag

Flags specifying a group of sheets to include during Matching.

| Name | Description |
|---|---|
| **syMatchIncludeEmpty** | Empty sheets will be included by **AddMatched** |
| **syMatchIncludeProtected** | Protected sheets will be included by **AddMatched** |
| **syMatchIncludeHidden** | Hidden sheets will be included by **AddMatched** |

### 8.8.10 syDatabaseFlag

Flags for pair's **DBoptions**

| Name | Description |
|---|---|
| **syDatabaseSort** | Records are sorted (on fields in primary key) before comparing. |
| **syDatabaseGroup** | Records are grouped by Result after comparing. |
| **syDatabaseAddID** | Adds an ID in the last column of the database to aid sorting and filtering. |

### 8.8.11 syResultCode

Constants used by the **SumByCode** property in Results.

| Name | Description |
|---|---|
| **syResultTabs** | Missing sheets. |
| **syResultCols** | Missing columns. |
| **syResultRows** | Missing rows. |
| **syResultKeys** | Duplicate Keys. |
| **syResultDups** | Duplicate Records. |
| **syResultCont** | Different Content. |
| **syResultFmts** | Different Formats. |

### 8.8.12 syProgressID

Constants used by **Progress** events to identify current ly executing sub process.

| Name | Description |
|---|---|
| **syProgressLinkCols** | Linking columns. |
| **syProgressLin** | Creating row indexes. |

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| | |
|---|---|
| **kData** | |
| **syProgressLinkRows** | Linking row indexes. |
| **syProgressCompCells** | Comparing cells. |
| **syProgressHighlight** | Processing DoHighlight. |
| **syProgressShowHide** | Processing DoShowHide. |
| **syProgressReport** | Processing DoReport. |
| **syProgressHighlightUndo** | Processing UnDoHighlight. |
| **syProgressShowHideUndo** | Processing UnDoShowHide. |
| **syProgressUpdate** | Updating cells (Navigator only). |

### 8.8.13 syResetType

Constants used by the **Reset** method in Project and Pairs.

| Name | Description |
|---|---|
| **syResetResults** | Results are removed. May display alert if Pairs are highlighted. |
| **syResetRelease** | Releases an event handler monitorirng accidental closing of the workbooks. |
| **syResetPairs** | All items in the pairs collection are removed. |
| **syResetAll** | All settings will be removed from the project. . |

### 8.8.14 syErrors

Constants used to identify a group of errors possibly raised during Project load.

| Name | Description |
|---|---|
| **syErrInit** | Errors raised during initialization. |
| **syErrProj** | Errors raised during project load. Project will not be loaded. |
| **syErrFile** | Errors raised during files load. Project will not be loaded. |
| **syErrPair** | Errors raised during Pairs add. Pair will not be added. |
| **syErrProp** | Errors raised when setting incorrect Pair options. Pair will be added, but these options will be ignored. |

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